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THE RECOGNITION AND CHARACTERISTICS OF EFFECTIVE EXECUTIVES.(U)  
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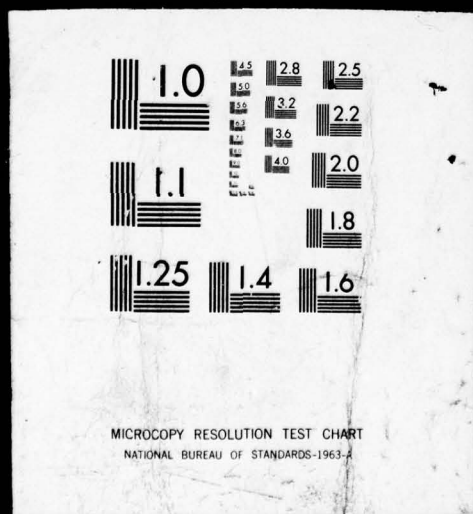


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# THESIS

THE RECOGNITION AND CHARACTERISTICS  
OF EFFECTIVE EXECUTIVES

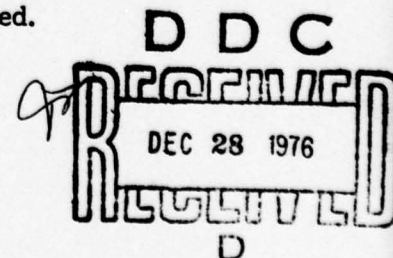
by

William Shortreed Burlem

September 1976

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED
The Recognition and Characteristics of Effective Executives.		Master's thesis, September 1976
7. AUTHOR(s)		6. PERFORMING ORG. REPORT NUMBER
William Shortreed/Burlem		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
Naval Postgraduate School Monterey, California 93940		
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE
Naval Postgraduate School Monterey, California 93940		September 1976
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES
Naval Postgraduate School Monterey, California 93940		118
16. DISTRIBUTION STATEMENT (of this Report)		15. SECURITY CLASS. (of this report)
Approved for public release; distribution unlimited.		Unclassified
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
executive effectiveness      executive motivation executive position and      hierarchial importance influence      functional importance hierarchial effectiveness      external/internal orientation		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
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The literature perceives the management function as directed either internally into the operation of an organization or externally into its operational environment, each to the exclusion of the other. It is suggested ~~that~~ both are necessary, and the characteristics and skills requisite to the successful accomplishment of each are different.

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DDC	Buff Section <input type="checkbox"/>
UNARRANGED	<input type="checkbox"/>
JUSTIFICATION	
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DISTRIBUTION/AVAILABILITY CODES	
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# The Recognition and Characteristics of Effective Executives

by

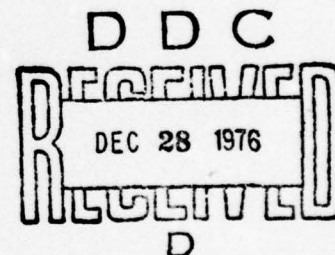
William Shortreed Burlem  
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Submitted in partial fulfillment of the  
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL  
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## ABSTRACT

A population was derived of individuals in positions of hierarchial importance from a variety of organizations whose effectiveness in their professional endeavors was apparent to their peers outside the organization. Characteristics of this select group were compared to those of populations of individuals not necessarily recognized as particularly effective but occupying positions of similar hierarchial rank.

Significant differences were found between the select group and reference populations in the three broad categories examined: perception of the management function, leadership style, and motivational needs. The select group interacted more with the environment external to their own organizations, and most significantly, are much more highly motivated by the need for power (and have a much lesser need for close interpersonal relationships) than the reference group.

The literature perceives the management function as directed either internally into the operation of an organization or externally into its operational environment, each to the exclusion of the other. It is suggested that both are necessary, and that the characteristics and skills requisite to the successful accomplishment of each are different.

## TABLE OF CONTENTS

I.	INTRODUCTION -----	9
	A. EFFECTIVE INDIVIDUALS -----	9
	B. OBJECTIVE OF THE THESIS -----	11
	1. Hypothesis -----	11
	2. Intent -----	12
II.	METHODOLOGY OF THE STUDY -----	13
	A. GENERAL -----	13
	B. LITERATURE SEARCH -----	13
	C. SELECTION OF STUDY SUBJECTS -----	14
	D. ACCUMULATION OF PRIMARY DATA -----	14
	1. Written Questionnaires -----	14
	2. Personal Interviews -----	16
	3. Computer Analysis of Performance Recognition -----	16
III.	SYNOPSIS OF THE LITERATURE -----	18
	A. APPLICABLE LITERATURE -----	18
	1. Perception of the Management Function ----	18
	2. Leadership Characteristics -----	20
	a. Techniques -----	20
	b. Personal Traits -----	21
	3. Motivation -----	22
	B. SUMMATION -----	25
IV.	EVALUATION OF THE PRIMARY DATA -----	26
	A. EXECUTIVE JUDGEMENTAL PERCEPTIONS -----	26



1. General -----	26
2. Biographical Data -----	26
3. Chi-Square Analysis -----	27
4. Student's "t" Analysis -----	34
B. MOTIVATIONAL STYLE -----	35
1. Purpose -----	35
2. Background -----	35
3. Results -----	36
C. MANAGERIAL STYLE -----	41
1. Purpose -----	41
2. Results -----	42
D. PERSONAL INTERVIEWS -----	47
1. Purpose -----	47
2. Results -----	47
E. EXECUTIVE PERFORMANCE RECOGNITION -----	51
1. Purpose -----	51
2. Data Used -----	51
3. Evaluation -----	52
V. SUMMARY -----	55
A. ANTICIPATIONS -----	55
B. REALIZATIONS -----	55
VI. CONCLUSIONS -----	57
VII. EPILOG -----	58
APPENDIX A: Executive Judgemental Perceptions Questionnaire -----	60
APPENDIX B: Motivational Style Questionnaire -----	70
APPENDIX C: Managerial Style Questionnaire -----	79
APPENDIX D: Outline for Personal Interviews -----	84



APPENDIX E:	NAEI Personal Performance Recognition -----	86
	Part 1 - The High Potential Program Defined -----	87
	Part 2 - Data Tabulation -----	95
APPENDIX F:	Executive Judgemental Perceptions, Summarized Individual Data -----	98
APPENDIX G:	Executive Judgemental Perceptions, Summarized Grouped Data -----	106
	Part 1 - Chi-Square Analysis -----	106
	Part 2 - Student's "t" Analysis -----	109
APPENDIX H:	Motivational Style Questionnaire Tabulated Data -----	111
APPENDIX I:	Managerial Style Questionnaire Tabulated Data -----	113
	Part 1 - Reference Group -----	114
	Part 2 - Study Group -----	115
BIBLIOGRAPHY	-----	116
INITIAL DISTRIBUTION LIST	-----	118

## LIST OF TABLES

Table 1:	Motivational Style Questionnaire Tabulated Data -----	37
Table 2:	Motivational Style Comparisons -----	38
Table 3:	Motivational Need Comparisons -----	39
Table 4:	Reference Population Delegation Characteristics -----	42
Table 5:	Study Population Delegation Characteristics --	43
Table 6:	Comparison of Managerial Styles -----	45
Table 7:	Summary of Citations -----	49

## LIST OF FIGURES

Figure 1:	Motivational Characteristics -----	40
Figure 2:	Motivational Needs -----	40

## I. INTRODUCTION

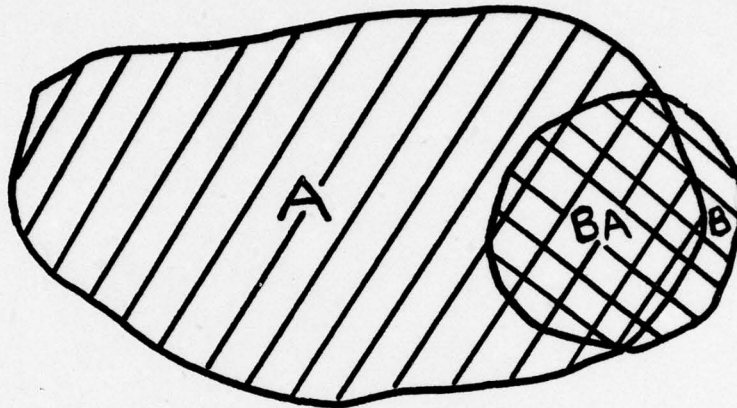
### A. EFFECTIVE INDIVIDUALS

Some individuals stand out from their peers in the effectiveness of their individual actions in an organization. This is true when viewed with a perspective from either within or without the organization. However, the nature of the jobs these persons occupy vary with this perspective. For example, clerical and such subsistence functions as custodial and food service may be carried out by individuals considered highly effective by others within the organization. It is unlikely, however, that the effectiveness of these individuals would be recognized by anyone external to the organization.

Conversely, occupants of executive-level positions can be highly visible as effective individuals to others outside the organization. One need only dwell for a moment upon organizations with which they have dealings to pick out those few individuals in those organizations who can be considered as highly effective. These are people who can be relied upon to "get the job done" by their organization, often regardless of the relationship between the job in question and the functional assignment of the individual. There are other occupants of executive-level positions recognized by peers external to the organization as ineffective in, or unresponsive to, functional assignments even when clearly within their area of responsibility.



An organization is therefore comprised of persons important within that organization either because of their contribution to the output of the organization or their location in the rank structure or both. On a Venn diagram, such a composition may be represented as:



where (A) represents functionally important positions, (B) represents hierarchially important positions, and (BA) represents both. An hierarchially important position is one perceived as important from both within and without the organization by virtue solely of its location in the rank structure of the organization, typically at executive level. A functionally important position on the other hand is one encompassing a task which, if not performed, would degrade the effectiveness or efficiency of an organization, jeopardize its product, or compromise its future. These could be at any organizational level, from the janitorial to the presidential. Conversely, it is generally recognized that most organizations contain some positions of hierarchial but little functional importance. Included in this category

are those positions recognized by Parkinson [1957, p. 17] as being generated by superiors for their own organizational aggrandizement and others recognized by Peter [1969, p. 8] as being occupied by people at their level of incompetence. The "organizational slack" (wasteful activity) represented by area B can still provide benefits [Cyert and March, 1963], "It allows for adjustment to increased workloads; reduces friction by not threatening core work when moving people, and creates "de facto" decentralization (token effort to that assumed by other sections)."

The effort, however, which produces and determines the organization's contribution to the broader objectives of higher-level headquarters is carried on in the intersection BA, where positions have both functional and hierarchial importance. It is individuals operating in this intersection with particular effectiveness who come to the attention of their peers outside the organization.

## B. OBJECTIVE OF THE THESIS

### 1. Hypothesis

There are, in any organization, persons occupying positions of both hierarchial and functional importance, and these people determine the output of the organization. In most organizations, some of these individuals stand out from the rest, and are recognized by their peers as being particularly effective in their performance. These persons perceive their executive function as being primarily related to the environment external to their organization, relate effectively

with this environment, have an intuitive ability to recognize important objective and tasks, and possess a catalytic capability to get things done by people and organizations.

Their leadership characteristics, motivations, and perceptions of the management function differ from those of their contemporaries who are not recognized as particularly effective.

## 2. Intent

It is the intent of this paper to establish whether the existence of such individuals is recognized by their peer group. It is the further purpose of this paper to measure and compare leadership characteristics, motivational needs, and management perceptions of such individuals with those of their peer group to determine where significant differences exist, and to relate any such differences to the executive-effectiveness parameter.



## II. METHODOLOGY OF THE STUDY

### A. GENERAL

The study was conducted in four main phases. First, a literature search was undertaken to investigate and evaluate for applicability previous research on executive ability linked to: the external or internal organizational orientations of these executives; their leadership characteristics; and their motivational needs. Secondly, executives who had in practice been observed to have generated particularly effective organizational output were identified to form the study population for this paper. Thirdly, oral and written questionnaires were adopted or developed and a computer analysis of executive recognition was conducted to generate primary data on the biographical, managerial, and motivational characteristics of this population, and lastly, the data from these were compared to those generated by reference populations and to the literature.

### B. LITERATURE SEARCH

A literature search was conducted to determine where or not previous investigators had specifically addressed the subject of executive effectiveness as a synergistic combination of hierarchical level, external orientation, and personal characteristics. The results are summarized in the succeeding section. A Xerox corporation "DATRIX" computer search was also conducted of doctoral dissertations on the subject, but with negative results.



### C. SELECTION OF STUDY SUBJECTS

Fourteen persons were identified as meeting the criteria for effective executives. These were persons in the Naval Service, both in and out of uniform, and one industry executive. All had been associated with programs to which their contributions were highly visible to others with similar program associations, but in other organizations. They had demonstrated the capability to relate their organizations to the mosaic of a framework of objectives or larger scope, and to elicit organizational response to these objectives.

### D. ACCUMULATION OF PRIMARY DATA

#### 1. Written Questionnaires

Existing vehicles for assessing the traits of these individuals which might reveal biographical, attitudinal, or motivational characteristics different from a population of their peers were reviewed. Two were selected for use:

(1) The "Executive Judgemental Perceptions" questionnaire developed, tested, and utilized in a previous Naval Postgraduate School thesis [Leshko and Vosseteig, 1975], included herein as Appendix A.

(2) A "Motivational Style" questionnaire (Appendix B) previously utilized in an analysis of the motivational needs and characteristics of managers nationwide.

The Executive Judgemental Perceptions questionnaire contained 49 questions designed to measure characteristics of executives in nine "classes of capacity identifiers:" decision-making ability; innovativeness; ability to manage

time; communicative ability; psyche/status; mobility; rewarding family life; job security; and health. Not all of these identified capacities appear directly applicable to this study. The first five, however, were considered appropriate, so the entire test was adopted.

Leshko and Vosseteig sampled two populations. One was comprised of the top executives of the 500 largest corporations and the other of supergrade (GS-16 to GS-18) civil-service employees of the Navy Department. Inasmuch as the selectees for this study were primarily Navy-oriented (3 senior Naval officers, 10 senior Navy civil servants, and only 1 senior industry executive), the second of the previous populations was selected for comparison. Analysis of the data from the Executive Judgemental Perceptions questionnaire followed the pattern established by Leshko and Vosseteig in order to facilitate comparison between these populations. Appendix F contains individual data grouped by question into characteristic categories (capacity indicators) considered by those investigators to be addressed by the question. Results of analysis of these data considered to be appropriate for non-parametric testing (chi-square in this instance) are given in Part 1 of Appendix G; similarly, data analyzed by the "Student's t" parametric method are displayed in Part 2.

The Motivational Style Questionnaire was considered to be highly appropriate in its entirety, and was so adopted. This vehicle has been applied hundreds of times to management

personnel nationwide, and statistical data on the distribution of the responses exist. Tabulated data from this questionnaire are presented in Appendix H.

While both of these questionnaires previously have generated population data against which to compare data from the current study subjects, another questionnaire was considered to be required to determine the degree of dependence of the subjects upon their subordinate personnel for the conduct of functions of varying nature, ranging from routine to unprogrammed. This questionnaire (Appendix C) would produce data for which no other population data existed for comparison. However, during its development it was tested by application to the 26 of the members of the Naval Aviation Executive Institute 1976 Naval Postgraduate School class. Appropriate data from this application were used for comparison purposes.

Three questionnaires (Appendix A, B, and C) were distributed to the 14 subjects under personal letter from the author. All but two of the subjects responded.

## 2. Personal Interviews

Personal interviews were scheduled with six subjects of the study population located in the National capital region on 24-25 March 1976. Appendix D illustrates generally the questions asked during these interviews.

## 3. Computer Analysis of Executive Recognition

Data were solicited to discern if conventional means of rewarding high job performance have been applied to



effective performance as defined herein. The Naval Air Systems Command agreed to modify an existing computer program in order to provide a listing of all civilian billets graded at the GS-13 and higher levels at the headquarters location and all NAVAIR field activities. While not strictly NAVAIR field activities, data were also provided for the Naval Weapons Center and the Naval Air Development Center. These two laboratories are sponsored by the Chief of Naval Material. However, their functions are heavily NAVAIR supported and their personnel are considered eligible for inclusion in the NAEI roster and programs.

From selected field activities, additional data were solicited to determine how many of these personnel were selected as "high-potential" employees under the Naval Aviation Executive Institute program, how many were given outstanding ratings during the last rating period, and how many received both recognitions. Inasmuch as the rating period covered also encompassed the first period of time that the high-potential evaluation and designation were in effect, the two data elements may be considered concurrent. They were intended for use in determining whether the same characteristics were evaluated in determining a person's current and potential performance. The NAEI high-potential program is described in Part 1 of Appendix E and the data obtained are summarized and tabulated in Part 2.

### III. LITERATURE SYNOPSIS

#### A. APPLICABLE LITERATURE

The literature applicable to executive effectiveness can be codified into three major areas: perception of the management function, leadership characteristics, and motivation of management personnel. While these are certainly mutually influencing, they will be separately considered herein and briefly synopsized below.

##### 1. Perception of the Management Function

There are two basic perceptions of the functional orientation of management. One is that it should relate to the external environment, and the conflicting one is that it should concentrate on the resolution of continuing in-house conflicts. The literature is replete with endorsements of both.

Barnard [1968, p. 21] stresses the inward orientation with the statement that, "It is precisely the function of the executive to facilitate the synthesis in concrete action of contradictory forces, to reconcile conflicting forces, instincts, conditions, positions, and ideals." Roche of General Motors emphasizes this with the statement, "My primary job is to reconcile different viewpoints and arrive at a consensus," [McMurry, 1974, p. 29]. Apparently not everyone at GM agreed. It was due to the consumptive demands upon his time of "reconciling different viewpoints" within General Motors, leaving him limited planning options

to deal with the external environment, that John Z. DeLorean resigned at age 48. The former Vice President and Group Executive of all GM car and truck divisions stated, "It was like standing the boiler room tending a machine and you were just watching it instead of running it," [McMurry, 1974, p. 3].

Uyterhoven recognized the need for peripheral corporate vision as well as internal management, "General management, or business policy, focuses on a company in its totality: its external posture (corporate strategy) as well as its internal structure (corporate organization)," [Uyterhoven, 1973]. He further states, "While strategy formulation, to a large extent, is an intellectual activity involving abstract plans and physical or financial resources, organizational leadership, in contrast, is an administrative activity involving people, their tasks and their relationships."

The existence of these two schools of management thought, the endogenous and the exogenous, is somewhat akin to Antony Jay's [1973] suggestion of two distinct corporate hierarchial occupants--those who maintain the structure and those who perform the work, implying that the work they perform is external to the structure. He likens these to the tribal camp and the hunting band which ventures forth from it to do a job. Harold J. Leavitt recognizes the dichotomy in the nature of work at hierarchial upper levels in an organization, calling them programmed and unprogrammed tasks. "The programmed tasks are the routine, familiar jobs. The unprogrammed work is creative: identifying



potential problems and seizing opportunities generally apprehended only by the skillful entrepreneur or intuitive executive--because unprogrammed work is unusually challenging, managers tend to postpone it while they perform routine tasks instead," [Burck, 1975]. However, Abraham Zaleznik [1970], states that "From observation of competent business executives, we know it is precisely their ability to define problems worthy of thought and action and to use their organization to evolve solutions which characterize their style. The contrary notion that executives are primarily caretakers, mediators, and seekers of consensus is more a myth than an accurate portrayal of how the competent ones attach themselves to power."

## 2. Leadership Characteristics

### a. Techniques

McMurray [1974] summarizes managerial techniques in use as follows:

- (1) Laissez-Faire
- (2) Democratic--participative
- (3) Manipulative--inspirational, evangelical
- (4) Autocratic--bureaucratic

Due to the exhaustive academic treatment previously accorded (and often endorsing) expansions of each of these in turn, no attempt will be made herein to elaborate upon them, except to say that the writings concentrate upon management of an organization. That is, they examine extensively endogeneous ways to improve effectiveness at the managerial



level in order consequently to improve productivity at the working level.

b. Personal Traits

A technique may be acquired or adopted, and this fact generates the basis for the many formal schools of management. Leadership ability, however, is based more upon inherited characteristics and early environmental experiences than formal education.

Whereas "management" may function only from a position of delegated formal authority, "leadership" is independent of published organizational assignment. Where the two are not coincident, informal authority will accrue to the leader and formal authority to the manager [Downs, 1967, p. 62]. "Informal organizations are found within all formal organizations, the latter being essential to order and consistency, the former to vitality," [Barnard, 1968, p. 286]. However, "when the authority of leadership is combined with the authority of position, men who have an established connection with an organization generally will grant authority, accepting orders far outside the zone of indifference," [Barnard, 1968, p. 1974]. That is, persons will accept a wide range of orders from such a man without conscious question of their authority. Recognizing the distinction between management authority and leadership influence, Derr states [1975, p. 27], "However, some persons in authority are also able to use their offices and other resources to acquire influence. This makes for a powerful combination."

It has been stated that bureaucratic authority is impersonal and efficient and resides in the office rather than its occupant, [Merton, 1952, p. 19]. It has been further stated, however, that "possibly the very impersonality allows the highly successful application of personal initiative," [Downs, 1967, p. 366]. The power of an office, therefore, comes from its influence, which can evolve not only from its hierarchial position, but also from the competence of the person in it, [Merton, 1952, p. 127].

### 3. Motivation

An extensive body of knowledge has been built concerning the motivation of individuals. Motivational needs have been codified as: the need for achievement (the need for success in relation to an internalized standard of excellence); the need for affiliation (the need for close interpersonal relationships with other people; and the need for power (the need to control or influence others) [Atkinson, 1958]. "Achievement--motivated individuals set high but realistic goals, are likely to plan ahead, enjoy taking personal responsibility, and are desirous of prompt and concrete feedback on the results of their actions. Affiliation--motivated individuals seek warm relationships and friendship. They are not concerned with getting ahead, but enjoy jobs where they can be with people and help people. Power--motivated individuals tend to seek positions of power or influence; they are politicians, executives, military officers, and teachers," [Tagiuri and Litwin, 1968].

While originally appearing to endorse the need for achievement as the key motivator [McClelland, 1966], David C. McClelland has recently published an article with David C. Burnham [1976] in which they conclude that the need for power is the greater motivational need for good managers, and that "the person whose need for affiliation is high does not make a good manager." As a result of extensive workshop studies with individual managers from different U. S. corporations, McClelland and Burnham conclude that, " . . . the top manager must possess a high need for power, that is, a concern for influencing people." Significantly, " . . . the top managers need for power ought to be greater than his need for being liked by people." Zalzenik had previously concluded [1970] that, "The development of careers, particularly at high managerial and professional levels, depends on accumulation of power as the vehicle for transforming individual interests into activities which influence other people." McMurry [1973] defines power as, " . . . the capacity to modify the conduct of other employees in a desired manner, together with the capacity to avoid having one's own behavior modified in undesired ways by other employees."

"Power" as used in these writings is not used in the destructive sense. McClelland and Burnham takes pains to describe that "Above all, the good manager's power motivation is not oriented toward personal aggrandizement but toward the institution which he or she serves." They go on to say that, " . . . we think the bogeyman of authoritarianism has in fact been wrongly used to downplay the importance of power



in management. After all, management is an influence game. Some proponents of democratic management seem to have forgotten this fact, urging managers to be primarily concerned with people's human needs rather than with helping them to get things done." May [1972] defines power as, " . . . the ability to cause or prevent change." He observes that among intellectuals there has been an association of power with force, leading to a disparagement and renunciation of the term. The attempt thereby to replace "power" with the more intellectually satisfying term "influence" May regards as essentially a false distinction. There is a growing body of opinion that the prescriptive model of some intellectuals as to what motivational needs should exist for a competent manager conflicts sharply with the descriptive model of those that do exist in the real world.

Four bases of power have been cited by French and Raven [1967]. They are expert power, reference power, reward power, and coercive (punishment) power. The latter two stem mainly from rank hierarchy in the organization, and may be applied effectively only within the organization. Zalzenik combines these two under the term "formal authority." Expert power (the extensive and specific knowledge of a subject) and reference power (charisma, or the power of personality) may be both endogenously and exogenously applied. Needless to say, one may (and normally would) possess more than one of the four power bases.

## B. SUMMATION

The literature is divided on the perception of the management function. Some writers see it as internally directed (oiling the organizational machinery), while others see it as externally directed (steering the corporate course).

Authority is accorded managers in accordance with their organizational position and their competence in that position. When both are high, power accrues to the individual. Where such an individual has a need for power, he will assume and be accorded authority beyond the bounds of his position.

A growing body of literature is concluding that the need for power, oriented to serve the organization, is the prime motivator of successful managers.

#### IV. EVALUATION OF THE PRIMARY DATA

##### A. EXECUTIVE JUDGEMENTAL PERCEPTIONS

###### 1. General

The Executive Judgemental Perceptions Questionnaire yielded data in three basic groups: biographical, non-parametric, and parametric. Analyses of the latter two groups appear in Appendix G. Biographical data and significant differences between the subjects under study and a reference group will be presented in this section.

###### 2. Biographical Data

The twelve subjects of this study exhibited the following biographical characteristics:

SEX	Male
RACE	White
AGE	29-58 years, average 45.5
MARITAL STATUS	10 married to original wife 1 divorced 1 never married
NUMBER OF CHILDREN	1 to 5, average 2.73
EMPLOYMENT	8 civil service, GS-14 to 16, average GS-15 3 naval officers: CDR, CAPT, RADM 1 industry executive
EDUCATION	1 high school diploma 8 bachelor degrees 2 Master's degrees 1 Doctorate degree



FIELD OF STUDY

5 engineering

4 business

2 mathematics/physics

3. Chi-Square Analysis

As a result of Chi-square analysis at the 95 percent level, eight of 31 questions so analyzed show differences in response of the two populations. These questions are:

10. What is your last level of formal education?

(1) High school diploma (2) BA (3) BS (4) MBA (5) MPA (6) Masters (7) Doctorate.

Question 10 was a biographical one. It indicates that the subjects of this study hold fewer advanced (Masters and doctorates) college degrees than would be expected of a population of Navy Department supergrade employees.

25. On the average, how many people do you see daily (excluding your immediate staff)?

A. 0-4

B. 5-8

C. 9-12

D. 12-16

E. 16 or more

Question 25 deals with communications, and is the only one in this field of five that produced a difference. The question was originally based upon the hypothesis that executives interact with more people and are exposed to more new ideas than less successful people. The twelve subjects of this study interact on a daily basis with significantly greater numbers of people than does the reference population.



37. Why would you not work at your present job at a lesser salary?

- A. Money is very important to you.
- B. You are worth what you are being paid.
- C. For your unique skills, you will not work for less than your present salary.
- D. Money is not a direct concern to you, but it is important to your family.
- E. Present earning power is necessary to provide a portfolio for future security.

46. In a position that you feel is not exactly what you want:

- A. You do whatever is required and receive what you believe to be only minimal personal or professional satisfaction from the results of your efforts.
- B. You consider the results of your efforts to be negligible and in fact believe your efforts to be "dog work."
- C. You consider your efforts to be personally and professionally rewarding even though you are not completely happy with your present position.
- D. You have in retrospect almost always derived personal satisfaction from your job regardless of your personal feelings toward the assignments.
- E. You do what is required, knowing or hoping that the present assignment is only a means to an end.

Questions 37 and 46 are two of the four which address the "psyche/status" or the reward needs of the individual.

From question 37 it is learned that money is an important motivator of our group and that they consider themselves worth what they are paid. Question 46 is more revealing. Apparently the 12-group is more determined than the reference population to give all assignments their best efforts regardless of their personal feelings about some. They get more personal satisfaction than the reference group from accomplishments useful to the organization regardless of the nature of the task.

38. How do you feel about the time you have to do your work?

- A. Have time for everything without feeling pushed.
- B. Wish you had a little more time to plan and to think.
- C. Necessary to keep pushing to get everything done.
- D. Very hard to do what is expected of you in the time available.
- E. Never seem to have enough time to do everything.

Question 38 is one of three in the field of the management of time. The study subjects apparently feel the pinch of time constraints more than the reference group, and generally feel that they must push hard to get things done. There are indications that even then they might not accomplish all they would desire to do.

41. You are about to propose a new policy which you feel is good for the organization. You intuitively believe, however, that you will have difficulty convincing certain segments of the organization. You are further aware that unless you receive almost across-the-board concurrence, top management will not institute the policy. How would you go about "seeing to it" that your policy is accepted?

A. Work around the oppositions, by going directly to top management and attempt to convince them of the profitability of your proposed policy.

B. Determine who your supporters are and seek their assistance to favorably impress the opposition.

C. Specifically, identify those individuals who are opposed and attempt to convince them individually.

D. Ignore the opposition and continue with your new policy changes.

E. Postpone introduction of the policy change and wait for better timing.

Question 41 is one of the five addressing decision making. The difference here between the study subjects and the reference group lies in the approach to overcoming opposition. The reference group tends to approach this problem by confronting the opposition and attempting to persuade them to change. The 12-group, on the other hand, seeks supporters at all levels for their concepts hoping to overcome, rather than convince, the opposition.



44. If you have just been promoted two levels above your present position, you would function at this new level:

A. By proceeding cautiously before making decisions.

B. By waiting to gain confidence and with additional experience make decisions faster than when initially assigned.

C. With no delay in decision making because earlier training and experience adequately prepared you for this increased responsibility.

D. Because in the past, when assigned to a new or unfamiliar area, you had no difficulty in commanding the new job and therefore would anticipate no delay in decision making now.

E. By operating at this higher level may require you to grow into the new job simply because of the scope of the position.

Question 44 also relates to the decision-making capacity indicator. The indication of differences by Chi-square analysis may be misleading. By the methodology explained in Appendix G, the responses were divided into two groups of ABC and DEN. Examination of individual response options, as has been done throughout this section, shows that in this instance both groups of answers infer the same characteristic, that of confidence in undertaking a new function. Regrouping the answers as follows to eliminate this competitive redundancy results in no difference at the 95 percent level of significance:

<u>RESPONSE OPTION</u>	<u>OBSERVED RESPONSE</u>	<u>EXPECTED RESPONSE</u>
A, B	5	2.544
C, D E, N	7	9.456

$\chi^2 = 3.009$ ; critical  $\chi^2 = 3.841$ .

It is, therefore, concluded that, with respect to meaningful characteristics, no difference exists between the subjects of this study and the Navy Department supergrades on this question.

47. You accepted employment with your present company:

A. Thinking or knowing that it would only be a temporary assignment, carrying with it a promise or possibility that a better position would be available in a reasonable time.

B. Realizing that it was exactly what you wanted to do and had no desire for higher levels of aspiration.

C. Because of your specific or unique skills that were desired by the employer, who was willing to pay you commensurate with your proven abilities.

D. Because of your unique skills that were desired by the employer, but you also set your remuneration schedule.

E. Because there were no other positions available or opportunities that suited you.

Question 47 is one of 7 pertaining to mobility. This is the only one of three non-parametric (chi-square) analytic measurements which indicated a mobility difference between

populations. One of the four mobility questions (number 9) parametrically analyzed which indicated a difference will be also addressed here. The results of question 47 would indicate that the group under study undertook employment with their present employer because they had skills recognized and needed by that employer, who was willing to pay them the requisite amount. The reference population, on the other hand, tended to look upon their initial employment as a temporary situation while awaiting a better opportunity, or to a much lesser degree as the exact job they desired, with no further job expectations. If the questions are regrouped to isolate the singular observed tendency of the subject population as previously perceived, the difference is reinforced:

<u>RESPONSE OPTION</u>	<u>OBSERVED RESPONSE</u>	<u>EXPECTED RESPONSE</u>
C	9	4.728
A, B, D, E, N	3	7.260

resulting in a  $\chi^2$  value of 6.360 (critical  $\chi^2$  at 95 percent = 3.841) compared to the original  $\chi^2$  differential of 5.333 with A and B grouped against C, D, E and N. This would indicate a definitely reduced tendency of the subject population to move compared to the reference population. However, even though there is no significant age difference between the populations (question number 4), there is a significant difference at the .05 probability level between the populations in that the mean of the group under



study has been with his present organization (question number 9) for 13.889 years versus 17.030 years for the reference group. There is no significant difference between the populations in the longest time that they have worked for one employer (question number 17). The anticipated relative mobility of the reference group due to their initial perception of their current employment does not appear to have materialized. The low mobility of both groups reflects previously observed tendencies of federal executives to remain in their employing organizations [U.S. Civil Service Commission, 1969]. In these previous observations, it was noted that over half of all personnel graded at and above the GS-15 level have worked in only one federal agency.

#### 4. Student's "t" Analysis

There were four questions out of thirteen analyzed parametrically that indicated differences between the group under study and the reference group. In addition to question number 9, mentioned above, there were:

5. Sex?

13. How many times have you been married?

14. How many children do you have?

The statistically significant difference indicated by application of the Student's t test to questions 5 and 13 is a tribute to the magnifying effect on the calculated t of very small variance differences between the populations. Inasmuch as the Student's t test assumes the same variance for each population, the differences thus calculated for

questions 5 and 13 will not herein be accorded any real significance [Moroney, 1953].

There did appear that the subject population statistically has significantly fewer children than the reference group. The relationship of that statistic to this study is not clear.

## B. MOTIVATIONAL STYLE

### 1. Purpose

The Motivational Style questionnaire was applied to measure those characteristics which predominate in motivating the study group to achieve its level of observed effectiveness, and to determine if these characteristics are representative of the total executive population.

### 2. Background

Atkinson [1958] stressed three basic needs as being motivators for people: the need for power, for affiliation, and for achievement. These have been defined previously in section III-A. These basic motivators were subsequently each broken into two characteristics, or managerial motivational styles by McClelland [1969] as follows:

<u>NEED:</u>	Power	Affiliation	Achievement
<u>STYLE:</u>	Coercer	Affiliator	Pace-setter
	Authoritarian	Democrat	Coach

A questionnaire has been developed and applied to managers nationwide to measure their style of motivating their employees, and consequently to measure their own motivational needs. The questionnaire is comprised of 36 questions

equally balanced among the six styles. If all six styles, and therefore the three basic needs, were equally distributed throughout the managerial population, one would then expect the answers pertaining to each style to be selected on the average of six times per questionnaire. However, needs and their motivational styles are not equally distributed; the need for achievement is most widely prevalent, followed by the need for affiliation, with the need for power least pervasive among the management population. By experience, therefore, weighting adjustments have been developed for each motivational style to convert actual responses to a number compatible for analysis assuming equal distribution of styles. A copy of the Motivational Style questionnaire is appended as Appendix B.

### 3. Results

Table 1 summarized the data obtained by application of the questionnaire to the study group. These data reflect incorporation of the weighting factors mentioned above. Therefore, the comparable mean for the characteristics of the population should be six, and that for the needs of the population should be 12.

A two-tailed students "t" test was applied to determine if the study group could have been selected by chance from the population. Inasmuch as the standard deviation of the population was not known, Bessel's correction was applied and "t" was calculated as:

$$\frac{(\bar{X}_s - \bar{X}_p) \sqrt{n - 1}}{s}, \quad [\text{Burlington and May, 1958}] \text{ where:}$$



TABLE 1  
MOTIVATIONAL STYLE QUESTIONNAIRE  
TABULATED DATA  
 (ADJUSTED)

CHARACTERISTIC	PSYCHOLOGICAL NEED			$\bar{x}$	s
	POWER	ACHIEVEMENT	AFFILIATION		
A. Coercer	80.5			6.708	1.422
B. Pace-setter		63		5.250	1.913
C. Authoritarian	113			9.417	1.832
D. Affiliator			47.5	3.958	1.137
E. Democrat			81.5	6.792	1.725
F. Coach		68.5		5.708	2.050
Total	193.5	131.5	129		
$\bar{x}$	16.125	10.958	10.750		
s	2.647	2.301	1.960		

$\bar{X}_s$  = mean of the sample

$\bar{X}_p$  - mean of the population

$n$  = sample size

$s$  = standard deviation of the sample

Degrees of freedom equal the sum of the number of respondents to each question minus two. Inasmuch as the number of respondents in the population group is not known exactly, but is conservatively in the hundreds, an equally conservative figure of 120 was utilized. The data from this process are summarized in Tables 2 and 3.

TABLE 2  
MOTIVATIONAL STYLE COMPARISONS

Style	t	Critical at $P(t) = .05$	Different?
Coercer	1.651	1.980	No
Authoritarian	6.186	1.980	Yes
Affiliator	5.957	1.980	Yes
Democrat	1.523	1.980	No
Pace-setter	1.300	1.980	No
Coach	0.472	1.980	No

It can be seen that the study population is significantly more authoritarian in their style of motivating subordinates than is the general population. It is also obviously

much less dependent upon affiliation as a motivator. In fact, the test statistic indicates that the probability of the differences in the two groups in each instance being a matter of chance is less than one in a thousand. The differences are therefore highly significant.

Table 3 illustrates the results when applying the "t" test as before, but to the motivational needs of the two groups.

TABLE 3  
MOTIVATIONAL NEED COMPARISONS

Need	t	Critical at $P(t) = .05$	Different?
Power	5.169	1.980	Yes
Affiliation	2.115	1.980	Yes
Achievement	1.502	1.980	No

Here again the differences are evident. The need of the study group for power (that is, the need to control or influence others) is so significant that the probability of this group being picked by chance from the total managerial population is again less than one in a thousand. The need for close interpersonal relationships with other people (affiliation) by the study group is significantly less statistically than that of the managerial population as a whole. There appears no statistically significant difference between the groups in their needs for achievement. Figure 1 and 2



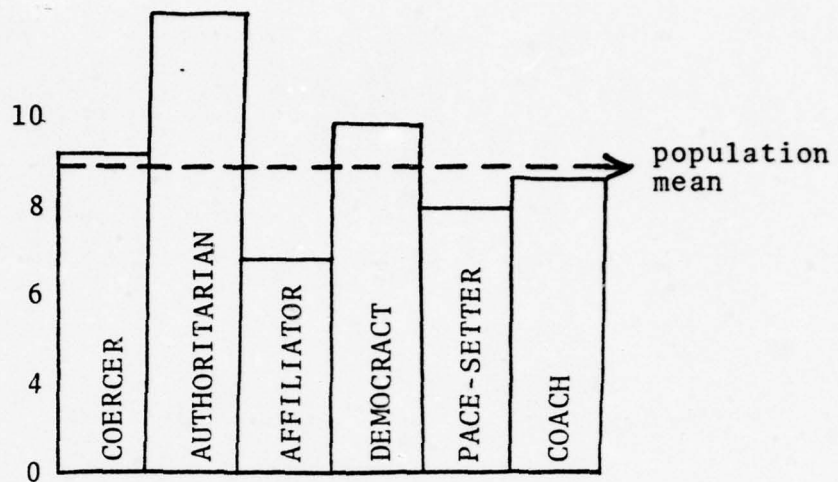


Figure 1

Motivational Characteristics

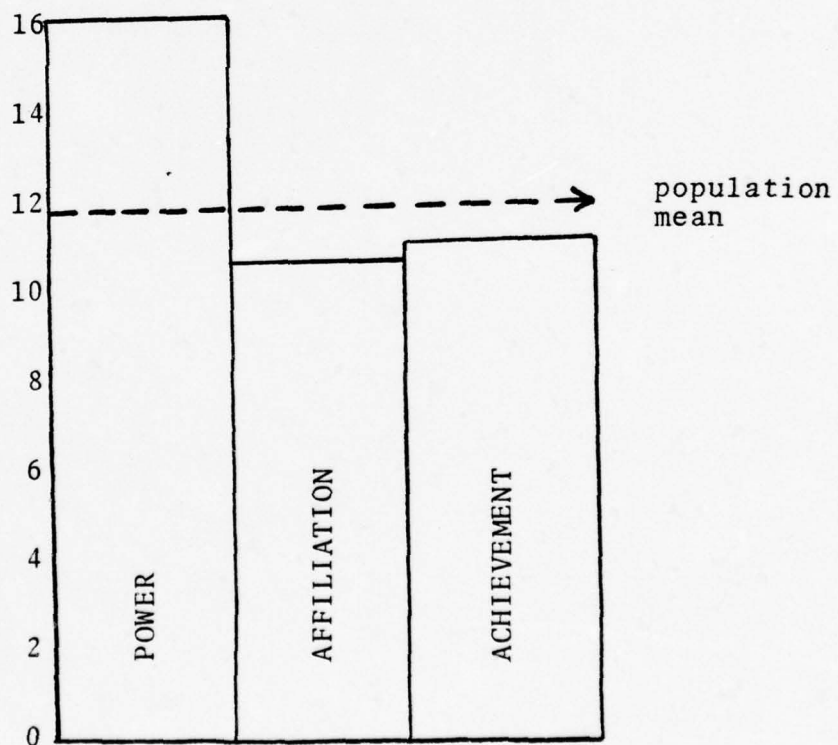


Figure 2

Motivational Needs

illustrate visually the characteristics of the group under study against the mean of the characteristics of the reference population.

### C. MANAGERIAL STYLE

#### 1. Purpose

The managerial style questionnaire was designed to explore two hypotheses:

a. That the study population, due to its orientation to the environment external to parent organizations, will assume functions observed to be unattended but with potential to contribute to the objectives of the organization in the larger sense, and that the visibility of members of this population invites extra assignments;

b. That the study population depends heavily on staff support for the conduct of programmed functions in order to respond more readily to unprogrammed opportunities.

The questionnaire addressed the following classes of functions:

- a. Regular duties (programmed functions)
- b. Assigned extra duties
  - (1) one-time tasks
  - (2) continuing functions
- c. Assumed extra duties
  - (1) one-time tasks
  - (2) continuing functions

A copy of the questionnaire is included as Appendix C. Accumulated data are tabulated in Appendix I.

## 2. Results

Tables 4 and 5 below present summarized data for each population showing the degree to which they delegate assigned and assumed recurring duties as these duties become routine with time. The reference population was comprised of 16 upper-level (GS-13 to GS-15) personnel of the first Naval Aviation Executive Institute Naval Postgraduate School class. Inasmuch as these personnel represent a managerial strata among the Naval Air Systems Command headquarters and many diverse NAVAIR field activities, valid comparisons could be expected between this and the study groups. In the table as in Appendix I, dependence upon staff is coded as:

1. Heavy
2. Moderate
3. Occasional
4. None

TABLE 4  
REFERENCE POPULATION  
DELEGATION CHARACTERISTICS

	$\bar{X}$ INIT.	$\bar{X}$ SUB.	t	CRIT. t	DIFF.?
Dependence upon staff for ASSIGNED recurring duties	3.11	2.89	0.503	1.746	No
Dependence upon staff for ASSUMED recurring duties	2.63	1.43	2.922	1.782	Yes



TABLE 5  
STUDY POPULATION  
DELEGATION CHARACTERISTICS

	$\bar{X}$ INIT.	$\bar{X}$ SUB.	t	CRIT. t	DIFF.?
Dependence upon staff for ASSIGNED recurring duties	2.38	1.75	1.397	1.761	No
Dependence upon staff for ASSUMED recurring duties	2.29	1.29	2.940	1.782	Yes

The critical "t" value was obtained for a P(t) of .05 and degrees of freedom equal to the sum of the number of respondents to each question, minus two. Inasmuch as it was desired to determine if staff dependence becomes greater (rather than just different) as functions transition from unprogrammed to programmed, a one-tail test statistic was utilized. The calculated Students' "t" value was obtained using the formula

$$t = \frac{|\bar{X}_1 - \bar{X}_2|}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

where:  $\bar{X}_1$  = the mean of the initial dependence upon staff;  
 $\bar{X}_2$  = the mean of the later dependence;  $s_1^2$  and  $s_2^2$  =  
the variances associated with  $\bar{X}_1$  and  $\bar{X}_2$ , and  $N_1$  and  $N_2$   
are the number of respondents contributing to each mean.

It is shown that there is no significant difference at the .05 probability level for either group between the initial and subsequent dependence upon their staffs for the performance of assigned recurring duties. However, each group does significantly increase its dependence upon staff for the performance of assumed recurring duties as these duties become institutionalized in the organization. It is very likely that many of the assigned extra duties are not transferrable, as would be the case with human rights program assignments and appointments of a personal character. Conversely, it is difficult to envision any functions assumed by an individual on his own volition which could not subsequently be delegated on that same volition.

Table 6 contains summarized data comparing the study population to the reference population with respect to delegation practices and functional assignments. The Students' "t" statistic in this case is measuring differences in either direction, requiring, therefore, a two-tail test. Otherwise, it is calculated as before. The chi-square test statistic for non-parametric data is calculated by the formula

$$x^2 = \sum_{i=1}^n \frac{(S_i - R_i)^2}{R_i}$$

$S_i$  = observed responses of the study population;  $R_i$  = expected responses from the reference population. The resultant chi-square was then compared to a critical table

TABLE 6  
COMPARISON OF MANAGERIAL STYLES

	REF. POP. $\bar{X}$	STUDY POP. $\bar{X}$	t	CRIT. t	DIFF.?
Dependence upon staff for regular duties	1.33	1.30	0.144	2.086	No
Initial dependence upon staff for assigned extra recurring duties	3.11	2.38	1.501	2.131	No
Later dependence upon staff for these duties	2.89	1.75	2.866	2.131	Yes
Dependence upon staff for assigned one-time tasks	3.36	2.57	2.365	2.120	Yes
Initial dependence upon staff for assumed functions	2.63	2.29	0.875	2.160	No
Later dependence upon staff for assumed functions	1.43	1.25	0.530	2.160	No
Civil service grade level	13.44	14.88	5.460	2.074	Yes
			$\chi^2$	CRIT $\chi^2$	
Number of assigned extra functions (1)	3.00	3.55	21.333	3.841	Yes
Number of assumed functions (1) excluding the data point 14 from the study population	1.79	3.00	21.886	3.841	Yes



value at a probability of occurrence of .95 and one degree of freedom (number of pairs minus one). Staff dependence is coded as in Tables 4 and 5.

There is no significant difference between the populations with respect to the degree of staff dependence for regular duties. Both rely heavily upon their staffs for the performance of these functions. Both groups also rely similarly upon their staffs, but to a much lesser degree, for the initial performance of extra recurring tasks which have been assigned. However, as these tasks become routine with repetition, the study population increases its dependence upon its staff significantly more than does the reference population.

The study population also depends more than the reference population upon subordinates for the performance of assigned one-time tasks. However, both groups similarly increase their dependence upon their staffs for the performance of assumed functions as these functions become institutionalized.

The greater delegation by the study group of "regularized" recurring assignments, coupled with increasing dependence upon staff for assumed functions as these functions transition from unprogrammed to programmed, tends to support the hypothesis that the study group relies heavily upon staff support for programmed functions in favor of personal response to unprogrammed tasks. However, the lack of any significant difference in this regard between the study and reference

groups require the rejection of the hypothesis that the study group is unique to this regard.

The second hypothesis examined by the Managerial Style questionnaire, that the study group assumes and attracts more special assignments than the reference group is clearly supported by this data.

#### D. PERSONAL INTERVIEWS

##### 1. Purpose

Personal interviews with six of the study group were conducted, generally along the lines of Appendix D. The principal purposes of these interviews were:

- a. To obtain from the study group of demonstratedly effective executives its views on the attributes of such a person.
- b. To determine if the selection of effective executives by the writer would be affirmed by their peer group.
- c. To obtain an indication of the percent of a population devoted to a common objective who are recognized as effective by others with a similar devotion.

##### 2. Results

###### a. Characteristics of an Effective Executive

The interviewees agreed that the characteristics described in Section II, those of relating organizations to the larger context within which they operate and eliciting response to these broader objectives, coincided well with their concept of what constitutes an effective executive, with one important exception. Added to these characteristics

by one of the interviewees was that of continual self-development and programmed development of promising subordinates. Reaffirmed by all was the necessity for the ability "to get the job done."

b. Affirmation of the Original Selectees

Of the twelve respondees, nine from seven different organizations were executives associated to varying degrees with a common project, and could be presumed to be aware of others associated with the program who exhibited characteristics of executive effectiveness as defined herein. Of these nine, five were interviewed to ascertain their observations in this regard. Precautions were taken absolutely to prevent phrasing the questions in any leading way. After discussing the characteristics of effective executives as described in paragraph 2a above, the interviewees were asked if they could identify any such persons with whom they may have had contact in any aspect of their work, without mentioning the program in question. A total of 33 persons were cited by the five interviewees as exhibiting the effectiveness characteristics described in connection with the total spectrum of programs with which the interviewees were associated. Among the 33, nine subjects of the study could be presumed to be known by baseline program association to each of the interviewees; seven of these were cited by at least one interviewee and four of these seven were cited by two. Each of the five interviewees and each of the nine



candidates for citation by the interviewees was assigned a number for identification purposes. Table 7 summarized the results of the interviews. Only candidate numbers 5 and 8 were not mentioned by the interviewees.

TABLE 7  
SUMMARY OF CITATIONS

Interviewee Number	1	2	3	4	5
Candidate number cited as effective	4	1	4	6	6
		7	2	1	
		3		7	
				9	

From the data there appears to be a common undercurrent of recognition by people involved in a program of others associated with the program who are particularly effective. Seven, or 78 percent, of the nine subjects selected as effective in the study were also cited as effective by at least one other source and four (44 percent) were so cited by two other sources. Given the wide spectrum of specialties of the subjects (financial, technical, data processing, program analysis, and policy), the correlation is considered significant. It is concluded that the original selection of certain executives as effective has been reaffirmed by their peer group, at least for those associated with a common project.

### c. Size of the Effective Population

A total of six people were interviewed, the five associated with the common project and one who was not. The interviewees cited executive-level personnel with whom they had dealings across the entire spectrum of their functions and whom they considered to be particularly effective. Thirty-eight persons from eleven distinctly identifiable organizations were so named. An examination was made of the executive level (at and above the GS-13 level for civil service and the commander level for military personnel) of these organizations to determine the total applicable executive population from which the 38 names evolved. In this way, a rough estimate might be made regarding the proportion of an executive population which demonstrates recognizable effectiveness traits. This examination resulted in an estimate of 374 for the total population of executives in the eleven organizations whose efforts, if particularly effective, would have come to the attention of at least one of the six interviewees. This is considered a conservative estimate. For example, of the total executive population of 1,062 in Naval Air Systems Command Headquarters (872 GS-13 and higher and 190 commanders and up), only 232 (21.8 percent) were considered certain to be observed by at least one of the interviewees if their performance was significantly effective.

A rough estimate, therefore, is that of a given population in executive-level (hierarchially important) positions, ten percent would, on the average, be classed as particularly effective by the definitions of this paper.

## E. EXECUTIVE PERFORMANCE RECOGNITION

### 1. Purpose

The previous section concluded that effective executives are recognized by their peers in other organizations. Data were collected to determine if executive effectiveness as defined herein is also recognized by the organizations for whom such people work.

### 2. Data Used

To determine this, two conventional rewards for effective performance were examined. First, the "outstanding" performance rating system was examined as applied to personnel at the GS-13 and higher levels in the Naval Air Systems Command Headquarters and field activities. Secondly, the designation as "high-potential" employees of the same population was explored. The "outstanding" rating assesses current performance and the "high-potential" designation predicts future capability to perform executive functions. It was desired to see if these two recognitions correlated with each other, and then to see if either correlated with the characteristics which were used to identify the study subjects.

A computer run was obtained from the Naval Air Systems Command which categorized the Naval Aviation Executive Institute civilian personnel by both grade level and employing activity. Additionally, data were provided for headquarters personnel concerning outstanding performance ratings and high-potential designees. Data on these ratings and designations were solicited by letter from NAVAIR field activities,



with results limited by various applications of the "Right to Privacy" act. Enough data were collected, however, to reach some conclusions. These data are tabulated in Part 2 of Appendix E.

### 3. Evaluation

There are a total of 2,568 civilian employees at and above the GS-13 civil service general schedule grade level in the Naval Air Systems Command organization, and another 1,222 at the closely related Naval Weapons Center and Naval Air Development Center commands. These personnel constitute, by definition, the civilian membership of the Naval Aviation Executive Institute.

For the NAVAIR activities, data are available for both outstanding ratings and high-potential recognitions from five organizations comprised of 1,108 personnel. For these personnel, performance recognition is as follows:

	Number	Percent of Population
Rated "Outstanding"	106	9.57
Designated "High-potential"	79	7.13
Receiving both	8	0.72

It is evident that the number of people assessed as being potential for higher-level executive positions are fewer than the number assessed as performing in an outstanding manner in their current executive positions. Moreover, that

the rating criteria used, either objective or subjective, are different is made clearly evident by the fact that only 7.5 percent of the people recognized as outstanding performers were assessed as having a high potential to accede to a higher level executive position. Conversely, only 10 percent of those attributed to have such potential were rated as outstanding performers in their current positions.

An attempt was made to correlate these data with the selection of effective executives by their peer group to determine if criteria used in this selection were similar to those used in either of the aforementioned performance recognitions. Twelve executives of seven different organizations were cited as especially effective by their peers on a common program. Of these 12, only three were members of the Naval Aviation Executive Institute and, therefore, subject to high-potential designation. Of these three, one was a high-potential designee. While this is a higher percentage than that of the total NAEI population, there is an insufficient quantity of data upon which to make a firm determination of significance.

Of these 12, six are subject to the civil service rating system. None of the six received outstanding performance ratings. Here again, while interesting, the data are insufficient for a finding of statistical significance. It is inconclusive, therefore, whether the subjective determination of effective executives by a peer group is based upon criteria similar to that utilized for the selection of outstanding performance by the civil service system or to that

used in the determination of high-potential employees by the Naval Aviation Executive Institute system.



## V. SUMMARY

### A. ANTICIPATIONS

A population was developed of persons in positions of hierarchial importance in a variety of organizations whose effectiveness in their professional operations was apparent to their peers outside the organizations. Characteristics of this select group were compared to those of a population comprised of persons whose effectiveness was only inferred by their similar hierarchial levels. It was anticipated that the select population would exhibit characteristics of orientation, leadership, and motivation different from an average population of persons occupying similar positions.

### B. REALIZATIONS

Meaningful differences were observed concerning: Orienta-  
tion--the select group is oriented more externally to the  
immediate organization than their peers; they interact daily  
with more people outside their immediate staff and upon their  
own initiative observe and pursue more opportunities for  
their organizations, while depending more heavily upon their  
staffs for assigned internal functions; Leadership character-  
istics--the select group is significantly more authoritarian  
in its leadership style, and is much less concerned than the  
peer group about being liked by their subordinates. They  
push hard, and are more interested in getting things done than  
they are in the nature of the things being done; Motivation--

the select group has a remarkably greater need for power than does the peer group, and a significantly lower need for close interpersonal relationships. They tend to achieve their objectives by overriding any opposition rather than by persuading it. Money is important to them and they consider themselves worth their pay.

There were also some biographical differences between the select and reference groups, but the significance of these to the thesis was not readily apparent: the select group has fewer children and has received less graduate college education than has the peer group.

## VI. CONCLUSIONS

There is a common recognition by the peer group of those executives who stand out from the group due to the effectiveness of their individual actions. Although not precisely measured, these particularly effective persons constitute a small portion, generously estimated at 10 percent, of the total executive population. There are measurable and significant differences between the standouts and their peer group.

The major significant difference between these populations of executives with observed and inferred effectiveness is that of motivation. The select population has a significantly greater need for power and a significantly lower need for affiliation than reference groups. This motivation influences the leadership characteristics of the selected individuals, and may have an influential effect on their perception of the management function as relating to the environment external to their organizations.



## VII. EPILOG

While the literature perceives the management function as either oriented to the internal operation of an organization or to the environment external to it, proponents tend to endorse either one to the exclusion of the other. I suggest that both exist and are necessary to the prosperity of an organization, but the characteristics and skills requisite for effective performance of the two functions are different.

The terms "manager" and "executive" are used interchangeably in the literature. In order to sharpen the awareness of the dichotomous nature of upper hierarchial levels in an organization, I suggest that a distinction such as the following would be beneficial: Executive--a member of the corporate hierarchy whose primary functions are related to interactions with the environment external to, and, therefore, beyond the direct control of, the corporation. This implies the requirement to make non-routine or unprecedented decisions in response to situations existent or anticipated in this environment, and is primarily involved with corporate strategy and planning; Manager--a member of the corporate hierarchy whose primary functions are the implementation of corporate strategy within the structured environment of the corporation. This implies corporate control and routine and precededent (however important) decision making.

The latter generates the motive power, and the former sets the course. The subjects of this study belong to the group defined as "executives" in this thesis. The characteristics of effective "managers" have not been addressed herein, but probably are those of the reference populations.

## APPENDIX A

### Executive Judgemental Perceptions Questionnaire

This appendix is an exact copy of the questionnaire utilized by Leshko and Vosseteig in their acquisition of data from 66 Navy Department supergrade civil servants and the 12 respondents in this study.



# EXECUTIVE JUDGMENTAL PERCEPTIONS



## SOLICITATION OF JUDGEMENTAL PERCEPTIONS

INSTRUCTIONS FOR COMPLETING THIS INFORMATION DOCUMENT ARE PROVIDED  
BEFORE EACH SECTION.

### SECTION ONE

*Please enter the most appropriate answer in the box at the right of each question. The number preceeding the solid vertical line correspondes to the question number in the appropriate box or boxes. If the question calls for a response of more than a one digit response please place "ONLY" one digit per box. Disregard the numbers to the right of the boxes.*

- |  | YOUR<br>ANSWER   |
|--|--|
| 1. Is your present employer. . . (1) Military (2) Civilian?  | 1. <input type="text"/> 1  |
| 2. What position do you hold within your organization?<br>(Please write out your position) i.e. President, Finanical<br>Manager, or Production Manager. If Military, please indicate<br>rank.<br>_____ | 2. <input type="text"/> 2  |
| 3. Location of organization? (1) New England (2) Eastern U.S.<br>(3) Southeast (4) North Central (5) South Central (6) North-<br>west (7) Southwest (8) Alaska (9) Hawaii (10) Overseas                | 3. <input type="text"/> <input type="text"/> 3 4                           |
| 4. Age?  | 4. <input type="text"/> <input type="text"/> 5 6                           |
| 5. Sex? (1) Female (2) Male  | 5. <input type="text"/> 7  |
| 6. Height? (INCHES)  | 6. <input type="text"/> <input type="text"/> 8 9                           |
| 7. Weight? (lbs)   | 7. <input type="text"/> <input type="text"/> <input type="text"/> 10 11 12 |
| 8. Race? (1) American Indian (2) Black (3) Oriental<br>(4) Spanish-American (5) White  | 8. <input type="text"/> 13   |
| 9. Lenght of time with present organization? (YEARS)   | 9. <input type="text"/> <input type="text"/> 14 15                         |
| 10. What is your LAST level of formal education? (1) High School<br>Diploma (2) BA (3) BS (4) MBA (5) MPA (6) Masters<br>(7) Doctorate   | 10. <input type="text"/> 16  |
| 11. What was your major field of study? _____  | 11. <input type="text"/> 17  |
| 12. Select the most appropriate situation that describes your<br>Marital Status? (1) Divorced (2) Divorced and remarried<br>(3) Married (4) Single (5) Widow/Widower                                   | 12. <input type="text"/> 18  |



13. How many times have you been married? 13. ☐ 19
14. How many children do you have? Sons \_\_\_\_\_  
 (Indicate on spaces provided) Daughters \_\_\_\_\_  
 None \_\_\_\_\_ 14. ☐ ☐ ☐ 20 21 22
15. Spouse's highest level of formal education? 15. ☐ ☐ 23 24  
 (1) No Spouse (6) 15 years  
 (2) Less than 12 years (7) 16 years  
 (3) 12 years (8) 17 years  
 (4) 13 years (9) 18 years  
 (5) 14 years (10) Greater than 18 years
16. How many different organizations have you been employed by 16. ☐ ☐ 25 26  
 in your life time?
17. What is the longest that you have worked for the same 17. ☐ ☐ 27 28  
 organization? (YEARS)
18. What is your religious preference? (1) None (2) Catholic 18. ☐ 29  
 (3) Jewish (4) Other (5) Protestant (Please indicate  
 denomination) \_\_\_\_\_
19. Have you changed your religious preference? (1) Yes 19. ☐ 30  
 (2) No
20. If yes, how many times? 20. ☐ 31
21. What is/was your fathers occupation? If deceased or retired 21. ☐ 32  
 please indicate last occupation \_\_\_\_\_
22. Are you a United States Citizen? (1) Yes (2) No 22. ☐ 33

## SECTION TWO

*Please answer the following questions in the present tense, i.e., how would you decide today, not how you decided in the past. Indicate your response in the box to the right of each question. The number preceeding the solid vertical line corresponds to the question number in the appropriate box. Disregard the numbers to the right of the boxes.*

23. Indicate the number of work-related organizations to which 23. ☐ 34  
 you hold current membership.
- A. 0  
 B. 1 - 2  
 C. 3 - 4  
 D. 5 - 6  
 E. More than the above



22 24. How many new friends have you made in the past year?

- A. No need to make new friends.
- B. 1 - 2
- C. 3 - 5
- D. 6 or more.
- E. Cannot remember exactly.

24. ☐ 35

25. On the average, how many people do you see daily, (Excluding your immediate staff)

- A. 0 - 4
- B. 5 - 8
- C. 9 - 12
- D. 12 - 16
- E. 16 or more.

25. ☐ 36

26. Which one of the following best describes what you usually do in making important decisions?

- A. Make the decision and inform your boss later on.
- B. Make the decision as if it were a routine matter.
- C. Put the problem up to those affected by the decision.
- D. Decision making is not my responsibility.
- E. Take time to check with your boss.

26. ☐ 37

27. Indicate which combination of words, when placed in the following sentence, would most accurately describe you: you hear about new work-related developments \_\_\_\_\_ most of my colleagues.

- A. Considerably before
- B. Sooner than
- C. At about the same time as
- D. Later than
- E. Sometime after

27. ☐ 38

28. Indicate the frequency with which your subordinates, peer, and/or superiors came to you in the past month for work related information which was not a function of your position?

- A. 1 - 3
- B. 4 - 7
- C. 8 - 11
- D. 12 - 16
- E. 17 or more

28. ☐ 39

29. In the past year, how many non-routine, work-related projects have been completed for which you supplied the original idea?

- A. 0
- B. 1 - 2
- C. 3 - 4
- D. 5 - 6
- E. 7 or more

29. ☐ 40

30. Which of the following do you tend to rely upon most heavily as a source of initial information for work-related projects and/or problems?

- A. Literature - books, manuals, dissertations, and other items which are not published on a regular basis.
- B. Vendors - representatives of, or documentation generated by suppliers or potential suppliers.
- C. Personal Experience - ideas which were previously used by yourself in similar situations and recalled directly by memory.
- D. Staff - selected members of your staff who are not assigned directly to the project being considered.
- E. External Sources - sources which do not fall into any one of the categories.

30. ☐ 41

31. When you hear about a new idea which may be of use to your organization you?

- A. Analyze it in depth before instituting it.
- B. See how it works in other organizations.
- C. Turn it over to a person in your organization who is most likely to use it.
- D. Discuss it and its applicability at your next conference.
- E. Turn it over to a cost analyst to determine its value.

31. ☐ 42

32. When information concerning major decisions are to be made, you?

- A. Recognize, among other things, that upward communications have little or no value to the management of the organization.
- B. Acknowledge that an important decision about decisions is when to communicate them, if at all.
- C. Insist that a decision is communicated in a language that will not antagonize its receptiveness.
- D. Recognize that some restrictions may improve organizational effectiveness.
- E. Insist that every decision be communicated in a language that leaves no doubt to the intent or spirit of the decision.

32. ☐ 43

33. Indicate the total number of journals, magazines, and newspapers which you regularly read.

- A. 1 - 2
- B. 3 - 4
- C. 5 - 6
- D. 7 - 8
- E. 9 or more

33. ☐ 44

34. What is your present salary range?

- |                         |                          |
|-------------------------|--------------------------|
| A. \$10,000 - \$20,000  | F. \$100,000 - \$150,000 |
| B. \$20,000 - \$30,000  | G. \$150,000 - \$200,000 |
| C. \$30,000 - \$50,000  | H. \$200,000 - \$300,000 |
| D. \$50,000 - \$75,000  | I. \$300,000 or greater  |
| E. \$75,000 - \$100,000 |                          |

34. ☐ 45



35. Would you work at your present job for a lesser salary?

- A. Yes
- B. No

35. ☐ 46

36. If Yes, by how much?

- |                        |                         |
|------------------------|-------------------------|
| A. 0 - \$1,000         | F. \$15,000 - \$20,000  |
| B. \$1,000 - \$2,000   | G. \$20,000 - \$30,000  |
| C. \$2,000 - \$5,000   | H. \$30,000 - \$40,000  |
| D. \$5,000 - \$10,000  | I. \$40,000 - \$50,000  |
| E. \$10,000 - \$15,000 | J. \$50,000 - \$100,000 |

36. ☐ 47

37. If No, why not?

- A. Money is very important to you.
- B. You are worth what you are being paid.
- C. For your unique skills, you will not work for less than your present salary.
- D. Money is not a direct concern to you, but it is important to your family.
- E. Present earning power is necessary to provide a portfolio for future security.

37. ☐ 48

38. How do you feel about the time you have to do your work?

- A. Have time for everything without feeling pushed.
- B. Wish you had a little more time to plan and to think.
- C. Necessary to keep pushing to get everything done.
- D. Very hard to do what is expected of you in the time available.
- E. Never seem to have enough time to do everything.

38. ☐ 49

39. With respect to the amount of time you spend at "work"

- A. You do not view your position as having fixed working hours
- B. You consider yourself as a professional that will give whatever amount of time is required, at the time, to accomplish the present undertaking.
- C. As a general rule, you accomplish at least or more work outside the office than while working at the office.
- D. You simply feel that working hours are for "others" and you give whatever time is required to accomplish a task and work at it until it is completed.
- E. You try not to allow your outside personal interests to cause you to mismanage your time.

39. ☐ 50



40. Of the situations given, which of these best describes your work routine?

- A. You have time in your daily routine to spend time on the unexpected.
- B. As a general rule, your daily schedule is very heavy.
- C. If it were not for your subordinates taking up a good part of your time, you would have more than enough time to expand your involvement in the company's business.
- D. You have no difficulty with the management of your time since you set a fixed and precise daily schedule, allowing time for your seniors, subordinates, and whatever is left belongs to you.
- E. You are concerned with the amount of time you have to spend at the office, because you feel your superiors interpret this as an indicator of ineffectiveness.

40. ☐ 51

41. You are about to propose a new policy which you feel is good for the organization. You intuitively believe, however, that you will have difficulty convincing certain segments of the organization. You are further aware that unless you receive almost across the board concurrence, top management will not institute the policy. How would you go about "seeing to it" that your policy is accepted?

- A. Work around the opposition, by going directly to top management and attempt to convince them with the profitability of your proposed policy.
- B. Determine who your supporters are and seek their assistance to favorably impress the opposition.
- C. Specifically, identify those individuals who are opposed and attempt to convince them individually.
- D. Ignore the opposition and continue with your new policy changes.
- E. Postpone introduction of the policy change and wait for better timing.

41. ☐ 52

42. As a decision maker:

- A. You accept success and failure equally.
- B. When you have failed, you have accepted the consequences and continued on as before.
- C. When you fail you accept the consequences and will analyze the causative factors thereto. Such a set back will not deter your future efforts.
- D. Your aim is to always succeed no matter what procedures or methods must be employed to accomplish your objectives.
- E. You are successful because you thoroughly investigate the parameters surrounding the decision about to be made.

42. ☐ 53

43. Assume you are considering several proven company executives for a promotion. However, you consider the best among them to be a "maverick" with respect to his management/leadership style. If you decide on selecting the "maverick" would you?

- A. Insist that his management/leadership style conform to present organization policies.
- B. Modify the organization to adjust to his management/leadership style.
- C. Prefer to allow him to operate as he pleases so long as his performance results in a highly satisfactory performance.
- D. Prefer to allow him to operate within his style, but at the appropriate time tactfully remind him that the company policies are sound and will prove beneficial to him in the long run.
- E. You would not select the "maverick."

43. ☐ 54

44. If you have just been promoted two levels above your present position (same company), you would function at this new level?

- A. By proceeding cautiously before making decisions.
- B. By waiting to gain confidence and with additional experience make decisions faster than when initially assigned.
- C. With no delay in decision making because earlier training and experience adequately prepared you for this increased responsibility.
- D. Because in the past when assigned to a new or unfamiliar area, you had no difficulty in *commanding the new job and* therefore, would anticipate no delay in decision making now.
- E. By operating at this higher level may require you to grow into the job simply because of the scope of the position.

44. ☐ 55

45. As you reflect on your career, judge the present, and postulate about the future regarding the relationship with your family, family responsibilities and demands of your present position, how would you best describe the way in which the relationship exists or developed?

- A. Family responsibilities were/are not neglected since a mutual bond of understanding developed as you proceeded through your career, wherein the family was/is supportive of your professional goals.
- B. Your family has/did not place you in a position wherein you had to choose between family or professional goals.
- C. Family obligations occasionally have taken a secondary position if your professional goals and requirements of your job were to be attained. However, you attempted to make it up to the family whenever the occasion(s) allowed.
- D. You attempted to make a compromise decision between family and job, but rarely sacrificed the family.
- E. Sometimes, demands of the job, i.e., time sensitive issues, demanded that you put more hours on the job than you would like.

45. ☐ 56



46. In a position that you feel is not exactly what you want:
- A. You do whatever is required and receive what you believe to be only minimal personal or professional satisfaction from the results of your efforts.
  - B. You consider the results of your efforts to be negligible and in fact believe your efforts to be "dog work."
  - C. You consider your efforts to be professionally and personally rewarding even though you are not completely happy with your present position.
  - D. You have in retrospect, almost always derived personal satisfaction from your job regardless of your personal feelings toward the assignments.
  - E. You do what is required, knowing or hoping that the present assignment (occupation) is only a means to an end.
46. ☐ 57
47. You accepted employment with your present company:
- A. Thinking or knowing that it would be only a temporary assignment, carrying with it a promise or possibility that a better position would be available in a reasonable time.
  - B. Realizing that it was exactly what you wanted to do and had no desire for higher levels of aspiration.
  - C. Because of your specific or unique skills that were desired by the employer, who was willing to pay you commensurate with your proven abilities.
  - D. Because of your unique skills that were desired by the employer but you also set your remuneration schedule.
  - E. Because there were no other positions available or opportunities that suited you.
47. ☐ 58
48. When you take a vacation:
- A. You find it is most beneficial to take one long vacation as opposed to several short vacation trips.
  - B. You fit your vacation schedule into what the organization will allow you to take.
  - C. You find it best to schedule your vacation with the needs and desires of your family.
  - D. You do not take long vacations (more than 2 weeks) because you recognize that you will have to work twice as hard to catch up on your work when you return.
  - E. You take vacations only for reasons of health.
48. ☐ 59
49. How good is your health?
- A. Poor - need rest and/or medical treatment to attack the rigorous of daily business activity.
  - B. Based upon your judgement and substantiated by your physicians evaluation you are in good health for your age.
  - C. Based upon your judgement and supported by your physicians evaluation you are in better health than someone of your age.
  - D. Fair - you recognize the need to keep yourself physically toned up, but your demanding schedule has precluded you from adhering to a set exercise schedule.
  - E. Perfect - can drive hard on any job, night or day.
49. ☐ 60



## APPENDIX B

### Motivational Style Questionnaire

This appendix represents the questionnaire used to evaluate motivational needs of the subjects of this study and is an exact copy of a questionnaire utilized in other studies of hundreds of subjects.

## MOTIVATIONAL STYLE QUESTIONNAIRE

### Instructions

Think about what you do in your job right now in relation to handling your subordinates. There are 36 pairs of statements which may describe what you do in your job. Read each pair of statements and decide which one best applies to you. Then mark an "X" in the box next to that statement.

For instance, if you think that the first statement in item 1 best describes what you do in your job, then place an "X" in the box which appears under column B.

You must answer all questions. Some questions you will find hard to distinguish because both seem to apply or neither seem to apply. Nevertheless, a choice must be made as to which of the two is more characteristic of you in your job.

Please be sure that you place your "X" in the box next to the statement you have chosen.

1. I believe that once the goals have been set, then each man should have enough motivation to achieve them.

OR

I will give responsibility, but take it away if performance is not forthcoming.

2. I tell subordinates not to worry about others' performance but rather to concentrate on self-improvement.

OR

I feel that reports are not very necessary in a situation where trust has been established.

3. I have high standards of performance and have less sympathy for those whose performance falls short.

OR

When a subordinate's plan is inappropriate, I stimulate him to re-think and come up with another plan.

4. I believe that human rights and values are more important than the immediate job on hand

OR

I reward good work and feel that punishment for non-performance has limited use.

5. I suggest alternative ways of doing things rather than indicate the way I prefer it myself.

OR

I think that subordinates should be able to overcome difficulties in the way to achievement by themselves.

A	B	C	D	E	F
	<input type="checkbox"/>				
	<input type="checkbox"/>				
					<input type="checkbox"/>
				<input type="checkbox"/>	
	<input type="checkbox"/>				
					<input type="checkbox"/>
			<input type="checkbox"/>		
				<input type="checkbox"/>	
					<input type="checkbox"/>
	<input type="checkbox"/>				



6. When alternatives are described to me I am not long in indicating the course of action I prefer.  
OR  
When a subordinate disagrees with me, I am careful to give my reasons why I want it done a certain way.
7. I think that disciplining employees does more harm than good.  
OR  
I develop a close personal relationship with subordinates because I believe this marks out a good manager.
8. I reward good work and feel that punishment for non-performance has limited use.  
OR  
When a subordinate fails to perform I let him know of the failure in a firm and reasoned manner.
9. I expect my subordinates to carry out plans I have prepared.  
OR  
I think that subordinates should be able to overcome difficulties in the way to achievement by themselves.
10. When I make a decision, I take the additional step of persuading my subordinates to accept it.  
OR  
I feel that accepted plans should generally represent the ideas of my subordinates.
11. I feel that people develop best in a trusting environment.  
OR  
I believe that once the goals have been set, then each man should have enough motivation to achieve them.

	A	B	C	D	E	F
6.			<input type="checkbox"/>			
OR			<input type="checkbox"/>			
7.				<input type="checkbox"/>		
OR				<input type="checkbox"/>		
8.					<input type="checkbox"/>	
OR			<input type="checkbox"/>			
9.	<input type="checkbox"/>					
OR		<input type="checkbox"/>				
10.			<input type="checkbox"/>			
OR					<input type="checkbox"/>	
11.					<input type="checkbox"/>	
OR		<input type="checkbox"/>				

12. When I discipline a subordinate I am definite in letting him know what he has done wrong.
- OR
- I feel that reports are not very necessary in a situation where trust has been established.
13. I believe that firm discipline is important to keep the work moving.
- OR
- I insist subordinates submit detailed reports on their activities.
14. I believe that a popular leader is better than an unpopular one.
- OR
- I believe that subordinates should not be too discouraged by setbacks in the job, but rather should be able to clear blockages themselves.
15. I believe that it is a manager's job to arouse the will to achieve in subordinates.
- OR
- I am constantly concerned with high standards of performance and encourage subordinates to reach these standards.
16. I am available to subordinates as a consultant and advisor when it is agreed they need help.
- OR
- I feel that people develop best in a trusting environment.
17. When a subordinate's plan is inappropriate, I stimulate him to re-think and come up with another plan.
- OR
- I often given orders in the form of a suggestion, but make clear what I want.

	A	B	C	D	E	F
12.	<input type="checkbox"/>					
OR					<input type="checkbox"/>	
13.	<input type="checkbox"/>					
OR	<input type="checkbox"/>					
14.				<input type="checkbox"/>		
OR		<input type="checkbox"/>				
15.						<input type="checkbox"/>
OR						<input type="checkbox"/>
16.					<input type="checkbox"/>	
OR					<input type="checkbox"/>	
17.						<input type="checkbox"/>
OR			<input type="checkbox"/>			

18. I believe that job security and benefits such as superannuation plans are important for employee happiness.

OR

When a subordinate's plan is inappropriate I stimulate him to re-think and come up with another plan.

19. In the long run, I will fire a man I consider to be unmanageable.

OR

I discourage arguments which upset the harmony amongst subordinates.

20. I feel that reports are not very necessary in a situation where trust has been established.

OR

I expect my subordinates to carry out plans I have prepared.

21. I am not so concerned with establishing close personal relationships as in getting subordinates to follow my example.

OR

I believe that human rights and values are more important than the immediate job on hand.

22. I watch for improvement in individual performance rather than insist on high level performance from subordinates.

OR

I discourage arguments which upset the harmony amongst subordinates.

23. I believe that subordinates should not be too discouraged by setbacks in the job, but rather should be able to clear blockages themselves.

OR

When I make a decision, I take the additional step of persuading my subordinates to accept it.

A	B	C	D	E	F
			<input type="checkbox"/>		
					<input type="checkbox"/>
<input type="checkbox"/>					
			<input type="checkbox"/>		
				<input type="checkbox"/>	
<input type="checkbox"/>					
	<input type="checkbox"/>				
			<input type="checkbox"/>		
					<input type="checkbox"/>
			<input type="checkbox"/>		
	<input type="checkbox"/>				
		<input type="checkbox"/>			



24. When a subordinate disagrees with me, I am careful to give my reasons why I want it done a certain way.

OR  
I think that disciplining employees does more harm than good.

25. I am constantly concerned with high standards of performance and encourage subordinates to reach these standards.

OR  
I believe that firm discipline is important to keep the work moving.

26. I discourage arguments which upset the harmony amongst subordinates.

OR  
I expect my subordinates to follow my instructions closely.

27. I develop a close personal relationship with subordinates because I believe this marks out a good manager.

OR  
When alternatives are described to me I am not long in indicating the course of action I prefer.

28. When a subordinate fails to perform I let him know of the failure in a firm and reasoned manner.

OR  
I am not so concerned with establishing close personal relationships as in getting subordinates to follow my example.

29. I expect my subordinates to follow my instructions closely.

OR  
I often give orders in the form of a suggestion, but make it clear what I want.

A	B	C	D	E	F
		<input type="checkbox"/>			
			<input type="checkbox"/>		
					<input type="checkbox"/>
<input type="checkbox"/>					
			<input type="checkbox"/>		
<input type="checkbox"/>					
		<input type="checkbox"/>			
		<input type="checkbox"/>			
	<input type="checkbox"/>				
<input type="checkbox"/>					
		<input type="checkbox"/>			

	A	B	C	D	E	F
30. I will give responsibility, but take it away if performance is not forthcoming.		<input type="checkbox"/>				
OR I am available to subordinates as a consultant and adviser when it is agreed that they need help.					<input type="checkbox"/>	
31. I think that subordinates should be able to overcome difficulties in the way to achievement by themselves.		<input type="checkbox"/>				
OR When I discipline a subordinate I am definite in letting him know what he has done wrong.	<input type="checkbox"/>					
32. I tend to rely on self-direction and self-control rather than doing much controlling myself.					<input type="checkbox"/>	
OR I suggest alternativeways of doing things rather than indicate the way I prefer it myself.						<input type="checkbox"/>
33. I seek to reduce resistance to my decisions by indicating what subordinates have to gain from my decision.			<input type="checkbox"/>			
OR I watch for improvement in individual performance rather than insist on high level performance from subordinates.						<input type="checkbox"/>
34. I often give orders in the form of a suggestion, but make clear what I want.			<input type="checkbox"/>			
OR In the long run, I will fire a man I consider to be unmanageable.	<input type="checkbox"/>					
35. I insist subordinates submit detailed reports on their activities.	<input type="checkbox"/>					
OR I am constantly concerned with high standards of performance and encourage subordinates to reach these standards.						<input type="checkbox"/>

OR

[illegible]



## APPENDIX C

### Managerial Style Questionnaire

This appendix is an exact copy of the questionnaire distributed to the subjects of this study to assess their dependence upon their subordinates in the performance of both programmed and unprogrammed tasks.

## MANAGERIAL STYLE QUESTIONNAIRE

NOTE: The phrase "Your Command" or "Your Organization" as used herein refers to that geographically contiguous, organizationally homogeneous group (such as the Office of the Assistant Secretary of Defense, Naval Air Systems Command Headquarters, a Naval Air Rework Facility, and the like) in which you are employed.

PLEASE RETURN TO:

William S. Burlem  
Naval Postgraduate School  
Bldg. 26, Pacific Missile  
Test Center  
Pt. Mugu, CA 93042

1. How many hierarchial line-management levels exist in your organization (a line-management level is defined as the gradations in organizational elements separated by supervisory positions such as Department/Division/Branch/Section/etc.)? \_\_\_\_\_

2. At which of these hierarchial levels is your basic job assignment? \_\_\_\_\_

3. a. Very briefly, what is the nature of your principal regularly assigned duties (such as financial, technical, etc.)? \_\_\_\_\_

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b. How many people are under your direct supervision or control? \_\_\_\_\_

c. To what degree do you depend upon your regular staff for the performance of these regularly assigned organizational functions:

(1) Heavily\_\_\_\_ (2) Moderately\_\_\_\_ (3) Occasionally \_\_\_\_

(4) Not at all \_\_\_\_

4. a. Within the last five years in your current organization, what additional recurring functions outside your normal job scope have occasionally been assigned to you (for example, EEO Coordinator, labor negotiator, and the like)? \_\_\_\_\_

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b. To what degree do you depend upon your regular staff for the initial performance of this recurring duties?

- (1) Heavily \_\_\_\_ (2) Moderately \_\_\_\_ (3) Occasionally \_\_\_\_  
(4) Not at all \_\_\_\_

c. After a period of familiarization and initial performance, to what degree then do you delegate these duties to your regular staff?

- (1) Heavily \_\_\_\_ (2) Moderately \_\_\_\_ (3) Occasionally \_\_\_\_  
(4) Not at all \_\_\_\_

5. a. Within the last five years in your current organization, what one-time functions (such as committees on reorganization and the like) outside your normal job scope were assigned to you?

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b. To what degree do you depend upon your regular staff for the performance of these duties?

- (1) Heavily \_\_\_\_ (2) Moderately \_\_\_\_ (3) Occasionally \_\_\_\_  
(4) Not at all \_\_\_\_

6. Have you ever observed the opportunity to fulfill a function unassigned, but in your estimation important, to your organization? \_\_\_\_\_

7. In your tenure with your organization within the past five years have you ever assumed such a function based upon such an assessment? \_\_\_\_\_

a. If so, how many were:

- (1) A one-time task without continuing responsibility for your organization? \_\_\_\_\_

(2) A function which, when assumed, subsequently became a regular job of your organizational unit? \_\_\_\_\_

(3) To what degree did you initially depend upon your regular staff for the execution of these assumed functions?

(a) Heavily \_\_\_\_ (b) Moderately \_\_\_\_ (c) Occasionally \_\_\_\_

(d) Not at all \_\_\_\_

(4) To what degree did you subsequently delegate those that became regular duties?

(a) Heavily \_\_\_\_ (b) Moderately \_\_\_\_ (c) Occasionally \_\_\_\_

(d) Not at all \_\_\_\_

8. During your tenure with your organization within the last five years, how often have you received special recognition for:

a. Your regular duties? \_\_\_\_\_

b. Your assigned additional duties? \_\_\_\_\_

c. Your assumed one-time functions? \_\_\_\_\_

d. Your assumed subsequently regular duties? \_\_\_\_\_

9. If applicable, what is your civil service grade level or military rank? \_\_\_\_\_

## APPENDIX D

### Outline for Personal Interviews

This appendix contains the outline used in generally formatting the interviews. It was used in order to insure all interviews were being conducted within a common framework. Results varied with the emphasis placed by the interviewee upon each question and related subjects.

1. How long have you been in this job?
2. How long have you been in this organization?
3. What was your previous job?
4. How long have you been in federal service?
5. Do you travel much?
6. With what other commands are your primary business associations?
7. Are there people in these other commands with whom you deal due to their personal characteristics rather than their organizationally assigned function?
8. If so, what are these characteristics?
9. Can you name people in this or other activities whom you consider to be particularly effective?
10. If so, why do you consider them so?



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## APPENDIX E

This appendix contains Naval Air Systems Command Instruction 12412.1 of January 1976 as part 1, describing the NAVAIR High-Potential program. Part 2 contains population data from NAVAIR activities and performance recognitions accorded these populations.



DEPARTMENT OF THE NAVY  
NAVAL AIR SYSTEMS COMMAND  
WASHINGTON, D.C. 20361

IN REPLY REFER TO  
NAVAIRINST 12412.1  
AIR-90A1  
8 Jan 1976

NAVAIR INSTRUCTION 12412.1

From: Commander, Naval Air Systems Command

Subj: Executive Development "High Potential" Assessment Program

Ref: (a) FPM ltr 412-2 of 29 Jan 1974 (NOTAL)  
(b) CSC Publication, "Considerations in the Identification of Managerial Potential," EMTAP No. 1, Aug 1973  
(c) SECNAVINST 12412.1 of 30 Apr 1974  
(d) NAVMATINST 12412.1A of 27 Sep 1974  
(e) OCMMINST 12412.2 of 17 Apr 1975

Encl: (1) Procedures for Identification of "High Potential" Personnel at NAVAIR Headquarters  
(2) Procedures for Identification of "High Potential" Personnel in Naval Air Systems Command Field Activities

1. Purpose. This instruction establishes procedures and responsibilities for identifying those individuals considered to possess high potential for eventually assuming executive responsibilities.
2. Scope. This instruction is applicable to individuals employed by the Naval Air Systems Command Headquarters (NAVAIR HQ) and its field activities.
3. Background. Reference (a) sets forth the requirement for all federal agencies to establish an operational program to identify individuals at or above GS-13 or equivalent levels who manifest high potential for the assumption of executive responsibilities. The purpose of such an identification is to properly develop individuals so identified, to enhance their executive and managerial skills, knowledges, and abilities, so as to assure the presence within the Command of the requisite capability to fill all of its executive needs. Reference (b) presents general guidelines in the development of a High Potential assessment program; references (c), (d) and (e) provide further guidance for the institution of an Executive Development Program and development of a High Potential assessment program. Enclosures (1) and (2) establish the procedures to implement such an identification program at NAVAIR HQ and its field activities.



8 Jan 1976

#### 4. Discussion

a. The High Potential assessment program is an integral part of the Command's Executive Development Program. The "potential" being assessed is potential to effectively carry out the highest level civilian executive responsibilities within the organization; thus, this program does not attempt to measure merely technical expertise or competence. Those individuals identified as "High Potentials" should receive the highest priority in planning, budgeting, and selecting for management-oriented training and development assignments. Additionally, those identified should be provided with opportunities for substituting or "filling in" during temporary absences (leave or travel) of their supervisors.

b. The number of "High Potentials" identified for participation in this program must necessarily be quite limited, and should be based on a consideration of forecasted vacancies and executive requirements. Thus, non-selection for this program should carry no implication of low potential; non-selectees would still have opportunities for development and promotion, as well as for re-application for the program in two years. The High Potential assessment program will be repeated once every two years.

#### 5. Responsibilities

a. Deputy Commander, Assistant Commanders, Comptroller, field activity Commanders and Commanding Officers are responsible for

(1) convening a High Potential Evaluation Board, comprised of no less than three high-level management personnel under their cognizance, to perform functions listed below; and

(2) carrying out assigned procedures detailed in enclosures (1) and (2) as appropriate;

b. High Potential Evaluation Boards are responsible for

(1) reviewing application packages, including self-appraisals and supervisory appraisals, and conducting interviews when necessary, to determine the highest executive potential within their respective groups;

(2) compiling a list of identified High Potentials, in priority order;

(3) providing feedback to program applicants;

(4) reviewing, approving, and monitoring Individual Development Plans (IDPs) of personnel selected for participation in the High Potential Executive Development Program;

(5) formally reviewing on an annual basis, the progress of each individual participant;

(6) evaluating the total program periodically for quality of results and responsiveness to the needs of management; and

(7) ensuring that at least one member of the Group Evaluation Board is to be designated for the responsibility of overseeing compliance with the agency Equal Employment Opportunity regulations, requirements and needs.

c. Chairpersons of High Potential Evaluation Boards are responsible for

(1) making final recommendations for High Potential identifications to the Vice Commander or activity Commanding Officer; and

(2) determining the proper distribution of selectees throughout the organization.

d. The Management and Administration Directorate (AIR-90), as the designated focal point and coordinator for the program, is responsible for

(1) providing coordination, assistance, and guidelines to addressees in regards to the program;

(2) serving as central repository for records concerning the program;

(3) carrying out assigned procedures as detailed in enclosures (1) and (2).

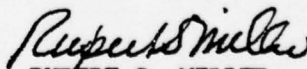
e. Field activity heads are additionally responsible for designating a focal point in the activity to coordinate the program and assume the responsibilities assigned to AIR-90 in paragraph 5 d above, as they relate to the activity.

6. Action. Addressees shall ensure that all personnel are familiar with and comply with the responsibilities and objectives of this program.

7: Forms

a. Field Activities. NAVSO Form 12412/4, Self-nomination Form, and NAVSO Form 12412/5, Executive/Managerial Potential Appraisal Form, may be obtained from Director of Civilian Manpower Management (Code 232).

b. NAVAIR Headquarters. NAVSO Form 12412/4 and NAVSO Form 12412/5 may be obtained from NAVAIR HQ (AIR-90).

  
RUFERT S. MILLER  
Vice Commander

NAVAIRINST 12412.1

8 Jan 1976

Distribution: FK1A(established quantity); others 5 copies each  
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8 Jan 1976

PROCEDURES FOR IDENTIFICATION OF "HIGH POTENTIAL" PERSONNEL  
AT NAVAIR HEADQUARTERS

1. Once every two years, the Management and Administration Directorate (AIR-90) will announce requests for self-nominations. The opportunity for self-nomination will be offered to all civilians between GS-13 and GS-15, or equivalent level.
2. All candidates must submit NAVSO Form 12412/4, Self-Nomination Forms to AIR-90 for initial processing.
3. AIR-90 will distribute NAVSO Form 12412/5, Executive/Managerial Potential Appraisal questionnaires for the appraisal of each candidate by two levels of supervision. Generally, the candidate's immediate supervisor plus the next higher level manager will be asked to complete this form. In cases wherein one of the supervisors has known the candidate for less than six months, an additional rating will be sought from a previous or higher level supervisor considered to be in a position to make such an appraisal.
4. These supervisors will be asked to make an assessment of the candidates' potential for executive responsibilities based on current and past observations of various described managerial, executive, and personal skills, traits, and abilities.
5. AIR-90 will process and collate the NAVSO Form 12412/4 and NAVSO Form 12412/5 and forward them to Group High Potential Evaluation Boards for use in assessing candidates.
6. Group High Potential Evaluation Boards will accomplish the following:
  - a. Evaluate each candidate on the basis of material forwarded by AIR-90, supplemented, when appropriate, by interviews of candidates and/or supervisory personnel.
  - b. Compile a rank-ordered list of those identified as possessing highest executive potential.
  - c. Provide feedback for all candidates in the form of personal conferences or written profiles identifying strengths, weaknesses, and developmental needs.
7. The Intergroup Evaluation Board, comprised of the Chairpersons of the Group Boards, will make a final screening to determine those individuals to be identified as "High Potential."
8. Upon notification of selection for identification as high potential, each selectee, together with his/her supervisor, will prepare a five-year Individual Development Plan (IDP). Guidance for preparation of the IDP will be provided by AIR-90.

9. Office Heads and Division Directors will review IDPs of all participants under their supervision, to assure that the Plan is in harmony with present and future mission and workload requirements.

10. Each Group High Potential Evaluation Board will also review the IDP, to ensure that it is neither wanting nor over-ambitious to meet program and organizational needs, present and future. The Board will then, on a continuing basis, monitor progress on the Plan, to ensure that its provisions are carried out, and that any modifications are in the best interests of both the Command and the individual.

11. Normally, each selectee will remain in the Executive Development Program for five years. The Group Evaluation Boards will, however, make a formal annual review of participants to evaluate progress in development and desirability of retention in the program.

12. A participant may leave or be asked to leave the program within five years because of one of the following situations:

a. No or little progress is made in development (barring extraordinary circumstances);

b. The Group Evaluation Board judges, on the basis of performance, that the individual's potential for executive responsibilities is limited;

c. The participant reaches all developmental objectives, in the judgment of participant, supervisor, and Group Evaluation Board;

d. The participant decides to leave the program because of a change in career goals.

13. A participant may remain in the program beyond five years because of one of the following situations:

a. Extraordinary workload or major change in permanent assignment has prevented the accomplishment of developmental experiences key to the participant's Plan;

b. The participant, though deemed to have high executive potential, is judged to need further development, in the opinion of participant, supervisor, and Group Evaluation Board. In such circumstances, the participant's Plan would be extended by one year.

14. The provisions of the Privacy Act of 1974 must be followed throughout this program. The maintenance of a record system for the Navy employee training and development program, which includes the Executive Development Program, is authorized by Title 5 USC 4103, 4115, and 4118, and by Executive Order 3957. The following requirements must be strictly followed:

Enclosure (1)

( a. Only information directly pertinent to the task at-hand (High Potential Identification or Individual Development Planning) is to be requested.

b. No demands for personal information are to be placed upon any employee.

c. All personal information must be protected as to confidentiality.

d. Only authorized officials involved in the High Potential Assessment process or in Individual Development Planning are to have access to the information, forms, and questionnaires obtained for this program unless prior authorization is granted, in writing, by the employees concerned.

e. Any personal records no longer needed for the program implementation must be either returned or discarded.

f. Employees are to be informed as to the authority for solicitation of any personal information, the principal purposes for which the information is needed, the routine uses to be made of the information, the voluntary nature of the information, and the consequences for not providing the information.

15. Management must make every effort possible to ensure that provisions of the Equal Employment Opportunity Act, and any additional local requirements thereof, are followed.

( Enclosure (1)



PROCEDURES FOR IDENTIFICATION OF "HIGH POTENTIAL" PERSONNEL IN  
NAVAL AIR SYSTEMS COMMAND FIELD ACTIVITIES

1. Field activities will follow the procedures and intent of enclosure (1), with the following exceptions:

a. The procedures and responsibilities assigned to the Management and Administration Directorate (AIR-90) in the identification process may be vested in the personnel operation most suitable to the needs of management;

b. Personnel at the GS-12 level may be considered for inclusion in the program if prior concurrence is obtained from the Director of Management and Administration (AIR-90).

2. Each field activity will provide a listing of all individuals identified as High Potential to NAVAIR Headquarters (AIR-90), and any changes subsequently made to this list should also be referred to AIR-90. Such listing will include the following information on each selectee:

- a. Priority ranking (if appropriate);
- b. Name;
- c. Organizational location;
- d. Series and grade;
- e. Occupational specialty; and
- f. Career goal.

3. Copies of Individual Development Plans (IDPs) for selectees should be provided to AIR-90 for review. The needs expressed in these IDPs will provide input for planning and designing special programs, rotational assignments, and educational programs.

APPENDIX E: Part 2  
NAVAL AVIATION EXECUTIVE INSTITUTE  
CIVILIAN PERSONNEL PERFORMANCE RECOGNITION, BY COMMAND

ORGANIZATION <sup>1</sup>	GRADE LEVEL								TOTAL	HIGH- POT. (#/%)	OUT- STNDG (#/%)	BOTH (#/%)
	GENERAL SCHEDULE											
	TITLE 10	17	16	15	14	13						
NAVAIRSYSCOMHQ	6	1	15	143	270	437			872	60/6.9	82/9.4	6/0.7
NAVWESA			1	25	70	193			289	13/4.5	N.A.	N.A.
NAVPHOTOCEN				1	3	24			28	0/0	N.A.	0/0
NAFI	2		2	7	15	76			102	5/4.9	N.A.	N.A.
REPLANT/NARF NORFOLK				9	12	60			81	0/0	4/4.9	0/0
NARF JACKSONVILLE				3	12	20			35	4/11.4	N.A	N.A.
NARF PENSACOLA				4	6	21			31	7/22.6	2/6.5	0/0
NARF CHERRY POINT				3	11	18			32	0/0	N.A.	0/0
NAVPLANTREPOS					16 <sup>2</sup>	60 <sup>2</sup>			76	0/0	N.A.	0/0
REPAC/MSDO				5	6	36			47	4/8.5	9/19.1	2/4.3
NARF ALAMEDA				5	8	28			41	4/9.8	N.A.	N.A.
NARF NORTH ISLAND				6	19	52			77	8/10.4	9/11.7	0/0
PACMISTESTCEN	2		3	35	82	334			456	136/29.8	N.A.	N.A.
NAVAIRTESTCEN			2	4	25	80			111	0/0	N.A.	0/0
NAS PATUXENT RIVER					2	8			10	0/0	N.A.	0/0

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NAVAL POSTGRADUATE SCHOOL MONTEREY CALIF

F/G 5/1

THE RECOGNITION AND CHARACTERISTICS OF EFFECTIVE EXECUTIVES.(U)

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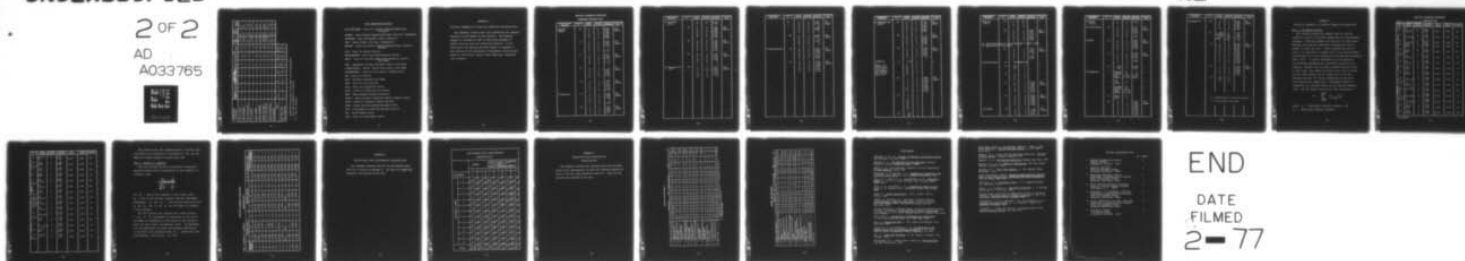
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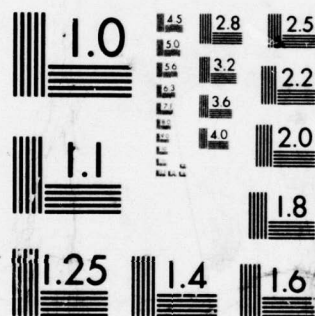


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MICROCOPY RESOLUTION TEST CHART  
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ORGANIZATION (continued)	GRADE LEVEL GENERAL SCHEDULE										TOTAL	HIGH- POT (%/%)	OUT- STNDG (%/%)	BOTH (%/%)
	TITLE						TOTAL	HIGH- POT (%/%)	OUT- STNDG (%/%)	BOTH (%/%)				
	10	17	16	15	14	13								
NPTR EL CENTRO				1	2	8		11	3/27.3	N.A.	N.A.			
NATF LAKEHURST				2	5	10		17	5/29.4	N.A.	N.A.			
NAEC PHILADELPHIA				3	17	52		72	0/0	N.A.	0/0			
NAS LAKEHURST					1	6		7	1/14.3	N.A.	N.A.			
NAPTC TRENTON				4	13	46		63	4/6.3	N.A.	N.A.			
NWEF ALBUQUERQUE				1	4	24		29	6/20.7	N.A.	N.A.			
NAILSC PAX RIVER				2	6	12		20	2/10.0	N.A.	N.A.			
NATSF PHILADELPHIA				1	6	13		20	7/35.0	N.A.	N.A.			
NAESU PHILADELPHIA					2	32		34	0/0	N.A.	0/0			
EPRF MONTEREY					2	5		7	0/0	N.A.	0/0			
TOTAL	10	1	23	264	615	1,655		2,568						
NWC CHINA LAKE			6	80	188	521		795						
NADC WARMINSTER	2		4	41	93	287		427						

1. Unabbreviated organization titles appear on the following pages.

2. Grade level distribution is estimated.

N.A. Data not available

### Full Organization Titles

NAVAIRSYSCOMHQ - Naval Air Systems Command Headquarters,  
Arlington

NAVWESA - Naval Weapons Engineering Support Activity, Washington

NAVPHOCEN - Navy Photographic Center, Anacostia

NAFI - Naval Avionics Facility, Indianapolis

REPLANT - Naval Air Systems Command Representative, Atlantic,  
Norfolk

NARF - Naval Air Rework Facility

NAVPLANTREPOS - Navy Plant Representative Offices

REPAC - Naval Air Systems Command Representative, Pacific,  
San Diego

MSDO - Management Systems Development Office, San Diego

PACMISTESTCEN - Pacific Missile Test Center, Point Mugu

NAVAIRTESTCEN - Naval Air Test Center, Patuxent River

NAS - Naval Air Station

NPTR - National Parachute Test Range

NATF - Naval Air Test Facility

NAEC - Naval Air Engineering Center

NAPTC - Naval Air Propulsion Test Center

NWEF - Naval Weapons Evaluation Facility

NAILSC - Naval Aviation Integrated Logistic Support Center

NATSF - Naval Air Technical Support Facility

NATSU - Naval Aviation Engineering Support Unit

EPRF - Environmental Prediction Research Facility

NWC - Naval Weapons Center

NADC - Naval Air Development Center



## APPENDIX F

### Executive Judgemental Perceptions Summarized Individual Data

This appendix contains basic data documenting the response frequency to each answer to each question. The expected response is included in order to facilitate grouping of answers into two cells for statistical analysis. It was calculated by multiplying the total number of responses to each question by the percentage of respondents selecting each answer in the previous survey of Navy Department supergrade civil servants.

## EXECUTIVE JUDGEMENTAL PERCEPTIONS

## SUMMARIZED INDIVIDUAL DATA

CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
I-Decision Making	26	A	6	3.456	Chi-Square
		B	4	3.456	
		C	1	4.368	
		D	0	0.180	
		E	1	0.360	
		N	0	0.180	
	41	A	2	0.180	Chi-Square
		B	5	3.636	
		C	4	7.452	
		D	0	0	
		E	0	0	
		N	1	0.180	
	42	A	1	0.912	Chi-Square
		B	1	0.180	
		C	8	10.176	
		D	0	0	
		E	2	0.732	
		N	0	0	
	43	A	0	0	Chi-Square
		B	0	0.360	
		C	3	5.460	
		D	8	5.820	
		E	0	0.360	
		N	1	0	
	44	A	2	1.092	Chi-Square
		B	3	1.452	
		C	5	3.276	
		D	1	3.276	
		E	1	2.724	
		N	0	0.180	
II-Innovation	27	A	4	1.632	Chi-Square
		B	5	5.088	
		C	3	4.908	
		D	0	0	
		E	0	0	
		N	0	0.360	
	28	A	2	2.724	Chi-Square
		B	2	3.096	
		C	5	3.816	
		D	0	0.744	

CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
II-Innovation (con't)	29	E	3	1.452	Chi-Square
		N	0	0.180	
		A	0	0.180	
		B	5	2.904	
		C	4	3.455	
		D	1	2.724	
	30	E	2	2.544	Chi-Square
		N	0	0.180	
		A	0	1.452	
		B	0	0.180	
		C	7	4.000	
		D	1	3.636	
	31	E	4	2.292	Chi-Square
		N	0	0.360	
		A	3	1.572	
		B	0	0.540	
		C	6	5.460	
		D	3	4.368	
III Management of Time	38	E	0	0	Chi-Square
		N	0	0	
		A	2	1.272	
		B	1	5.820	
		C	5	2.004	
		D	1	0.732	
		E	3	2.184	
		N	0	0	



CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
IV-Communications	39	A	2	1.452	Chi-Square
		B	8	9.256	
		C	1	0	
		D	1	0.540	
		E	0	0.732	
		N	0	0	
	40	A	3	6.000	Chi-Square
		B	7	5.640	
		C	0	0	
		D	2	0.360	
		E	0	0	
		N	0	0	
	23	A	3	1.452	Chi-Square
		B	5	6.000	
		C	4	2.184	
		D	0	1.272	
		E	0	0.912	
		N	0	0.180	
	24	A	0	0.180	Chi-Square
		B	1	1.824	
		C	2	4.368	
		D	9	4.728	
		E	0	0.732	
		N	0	0.180	

CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
IV-Communications (con't)	25	A	2	1.272	Chi-Square
		B	0	2.724	
		C	1	4.176	
		D	3	1.824	
		E	6	1.824	
		N	0	0.180	
	32	A	0	0	Chi-Square
		B	2	2.544	
		C	1	1.092	
		D	1	0.540	
		E	7	7.092	
		N	1	0.732	
	33	A	1	0.180	Chi-Square
		B	3	1.824	
		C	4	4.176	
		D	2	2.004	
		E	2	3.816	
		N	0	0	
V-Mobility  (Note: For Question Nos. 9, 16, and 17, Data Reduced For Civilians Only; N=9)	9	3 yrs	1		t
		7	1		
		8	1		
		11.	2		
		16	1		
		21	1		
		25	1		
		27	1		
	16	1	0	0.684	Chi-Square
		2	1	1.638	
		3	1	1.908	
		4	2	1.773	
		5	1	0.693	
		6	3	0.819	
		≥ 7	1	1.359	
		N	0	0.135	
	17	6	1		t
		7	1		
		8	1		
		11	1		
		16	1		
		21	1		
		25	1		
		27	1		
	19	29	1		t
		Yes	2		
		No	9		
		N	1		

CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST	
V-Mobility (con't)	20	0	10		t	
		1	2			
		2	0			
		3	0			
	21*	A	1	1.632	Chi-Square	
		B	0	1.272		
		C	5	4.176		
		D	1	0.176		
		E	5	2.544		
		N	0	0.912		
*A = High Professional; B = Low Professional C = White Collar; D = Agriculture; E = Blue Collar						
VI-Psychic/Status	47	A	1	4.548	Chi-Square	
		B	1	1.452		
		C	9	4.728		
		D	1	0		
		E	0	1.08		
		N	0	0.180		
	34	Not Appropriate				
	35	Yes	5		t	
		No	7			
		N	0			
	36	A	1		t	
		B	0			
		C	4			
		D-J	0			
	37	A	1	0.105	Chi-Square	
		B	4	1.694		
		C	0	1.064		
		D	1	0.742		
		E	1	0.847		
		N	0	2.548		
	46	A	0	0.180	Chi-Square	
		B	0	0.180		
		C	1	4.908		
		D	8	5.640		
		E	3	0.732		
		N	0	0.360		
VII-Health	49	A	0	0	Chi-Square	
		B	4	5.640		
		C	5	4.176		
		D	1	0.912		



CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
VII-Health (con't)		E	2	1.272	
		N	0	0	
VIII Job Security	48	A	1	1.272	Chi-Square
		B	6	2.724	
		C	4	5.820	
		D	1	1.632	
		E	0	0	
		N	0	0.540	
IX Family	45	A	4	4.000	Chi-Square
		B	2	2.364	
		C	2	3.096	
		D	1	0.540	
		E	2	2.000	
		N	1	0	
	12	A	1	0.180	Chi-Square
		B	0	0.180	
		C	10	11.268	
		D	1	0	
		E	0	0.360	
		N	0	0	
	13	Once	11	10.000	t
		Twice	0	1.000	
X-Biographical	4	Minimum	29	37	t
		Maximum	58	63	
		Mean	45.500	50.439	
		Median	42.500	51.667	
	5	Male	12		t
		Female	0		
	7	Minimum	138		t
		Maximum	205		
		Mean	156.428		
		Median	167.500		
	8	White	12		t
		Other	0		
	10	A	1	0.360	Chi-Square
		B	5	1.452	
		C	3	3.084	
		D	1	0.180	
		E	0	0.360	
		F	1	3.636	
		G	1	2.724	
		N	0	0.180	

CHARACTERISTIC MEASURED	QUESTION #	ANSWER LETTER	OBSERVED RESPONSE	EXPECTED RESPONSE	APPLICABLE TEST
X-Biographical	*11	A	4	4.000	Chi-Square
		B	3	3.000	
		C	0	2.000	
		D	4	1.837	
		N	0	0.165	
	14	Sons	15	107	t
		Daughters	15	107	
		Total	30	214	
		Mean	2.727	3.147	
		N	11	68	
	15	A	2	0.180	Chi-Square
		B	0	0.180	
		C	3	3.276	
		D	1	0.912	
		E	3	1.452	
		F	0	0.912	
		G	1	1.824	
		H	1	1.632	
		I	1	0.912	
		J	0	0.360	
		N	0	0.360	
	18	A	2	1.632	Chi-Square
		B	4	3.276	
		C	0	0.540	
		D	1	0.180	
		E	5	6.348	
	22	Yes	12	t	
		No	0		
		N	0		
<div>* A = engineering; B = other hard science;</div> <div>C = soft science; D= business</div>					

## APPENDIX G

### Executive Judgemental Perceptions Summarized Grouped Data

#### Part 1: Chi-Square Analysis

This section contains the elements used in, and the results of, analysis of answers appropriate for non-parametric treatment. Data were grouped into four cells so that, where possible, the expected (theoretical) response was five or greater in those two cells. "From a theoretical point of view, it is legitimate to combine cells in any desired manner, provided that one is not influenced by the observed frequencies." [Hoel, 1954]. To insure independence of such influence, the following methodology was consistently applied in the grouping. Whenever any one answer expected selection seven or more times, that answer was placed in one cell by itself and all other grouped into the second cell; if no such dominance existed, the replies commencing with the first were consecutively summed until a reasonable balance of frequencies was attained between the two expected response cells. The chi-square statistic was then calculated by:

$$\chi^2 = \sum_{i=1}^N \frac{(O_i - E_i)^2}{E_i}$$

where  $O_i$  = individually observed responses, and  
 $E_i$  = individually expected responses.



# EXECUTIVE JUDGEMENTAL PERCEPTIONS

## SUMMARIZED DATA

### PART 1: CHI-SQUARE ANALYSIS

QUESTION #	ANSWER LETTERS	OBSERVED RESPONSE	EXPECTED RESPONSE	CHI-SQUARE	CRITICAL VALUE	DIFFERENT
decision-making	26	A,B C,D,E,N*	10 2	6.912 5.088	3.254	No
	41	C A,B,D,E,N	4 8	7.452 4.548	4.219	Yes
	42	C A,B,D,E,N	8 4	10.176 1.824	3.061	No
	43	A,B,C D,E,N	3 9	5.820 6.180	2.653	No
	44	A,B,C, D,E,N	10 2	5.820 6.180	5.829	Yes
	27	A,B C,D,E,N	9 3	6.720 5.280	1.765	No
	28	A,B C,D,E,N	4 8	5.820 6.180	1.105	No
	29	A,B,C D,E,N	9 3	6.539 5.461	2.036	No
	30	A,B,C D,E,N	7 5	5.632 6.368	0.626	No
	31	C A,B,D,E,N	6 6	5.460 6.540	0.098	No
management of time	38	A,B C,D,E,N	3 9	7.092 4.908	5.773	Yes
	39	A,C,D,E,N B	4 8	2.744 9.256	0.775	No
	40	A B,C,D,E,N	3 9	6.000 6.000	3.000	No
	23	B A,C,D,E,N	5 7	6.000 6.000	0.333	No
communications	24	A,B,C D,E,N	3 9	6.372 5.628	3.805	No
	25	A,B,C D,E,N	3 9	8.172 3.828	10.261	Yes

\* no response

QUESTION #	ANSWER LETTERS	OBSERVED RESPONSE	EXPECTED RESPONSE	CHI-SQUARE	CRITICAL VALUE	DIFFERENT
(cont.) ↓ 32	A,B,C,D E,N	4	4.176	0.011	3.841	No
		8	7.824			
↓ 33	A,B,C D,E,N	8	6.180	1.105	3.841	No
		4	5.820			
↑ mobility ↓ 16	1,2,3 >4,N	2	4.230	2.207	3.841	No
		7	4.780			
↓ 21	A,B,C D,E,N	6	7.080	0.636	3.841	No
		6	4.920			
↓ 47	A,B C,D,E,N	2	6.000	5.333	3.841	Yes
		10	6.000			
↑ statistics ↓ 37	A,B C,D,E,N	5	1.799	7.666	3.841	Yes
		2	5.201			
↓ 46	A,B,C D,E,N	1	5.268	6.164	3.841	Yes
		11	6.732			
49 Health	A,B C,D,E,N	4	5.640	0.900	3.841	No
		8	6.360			
Job 48 Security	A,B C,D,E,N	7	4.000	2.750	3.841	No
		6	8.000			
↑ family ↓ 45	A,B C,D,E,N	6	6.364	0.440	3.841	No
		6	5.636			
↓ 12	C A,B,D,E,N	10	11.268	2.339	3.841	No
		2	0.732			
↑ biographical ↓ 10	A,B,C >C	9	4.896	5.811	3.841	Yes
		3	7.104			
↓ 11	A B,C,D,E,N	4	4.000	0.000	3.841	No
		8	8.000			
↓ 15	A,B,C >C	5	3.636	0.533	3.841	No
		7	8.364			
↓ 18	A,B,C,D E	7	5.652	0.608	3.841	No
		5	6.348			

This statistic was then compared against a critical value from tables at a probability of occurrence of .950 and one degree of freedom (numbers of pairs minus one).

## Part 2: Student's t Analysis

This part displays the data from answers to questions analyzed parametrically by application of the "Student's t" technique, where

$$t = \frac{|\bar{X}_o - \bar{X}_e|}{\sqrt{\frac{S_o^2}{N_o} + \frac{S_e^2}{N_e}}}$$

and  $\bar{X}_o$  = mean of the responses to the current study;  
 $\bar{X}_e$  = mean of the previous responses from Navy Department supergrades;  $S_o^2$  and  $S_e^2$  = the variances associated with  $\bar{X}_o$  and  $\bar{X}_e$ , and  $N_o$  and  $N_e$  are the number of responses in each instance.

The test statistic was compared with a table value at a  $p(t)$  of .05 and degrees of freedom equal to the sum of the number of respondents of both groups to each question, minus two [Crow, Davis, and Maxfield, 1955]. The hypothesis that the populations are alike with probable significance is rejected if the calculated value of  $t$  exceeds the table value [Moroney, 1974] at the .05 level.



# EXECUTIVE JUDGEMENTAL PERCEPTIONS

## SUMMARIZED DATA

### PART 2: STUDENT'S "t" ANALYSIS

QUESTION NUMBER	OBSERVED RESULTS			EXPECTED RESULTS			AT .05 PROBABILITY LEVEL		
	X	s <sup>2</sup>	N	X	s <sup>2</sup>	N	t	CRITICAL t	PROBABLY DIFFERENT?
9	13.889	14.821	9	17.030	10.012	66	2.342	1.993	Yes
17	16.667	82.750	9	21.016	45.381	64	1.382	1.996	No
19	1.818	0.164	11	1.875	0.111	64	0.442	1.993	No
20	1.000	0	2	1.250	0.500	8	1.000	2.306	No
35	1.583	0.265	12	1.621	0.239	66	0.237	1.992	No
36	2.600	0.800	5	3.333	6.132	24	1.137	2.056	No
13	1.000	0	11	1.077	0.072	65	2.314	1.992	Yes
4	45.500	95.341	12	50.439	44.373	66	1.682	1.992	No
5	2.000	0	12	1.924	0.071	66	2.317	1.992	Yes
7	167.9	485.7	12	172.9	530.6	66	0.718	1.992	No
8	5.000	0	12	4.909	0.299	66	1.352	1.992	No
14a	1.364	0.655	11	1.981	0.849	54	2.528	1.999	Yes
14b	1.364	0.855	11	2.058	1.506	52	2.124	2.000	Yes
22	1.000	0	12	1.000	0	65	0	1.920	No

## APPENDIX H

### Motivational Style Questionnaire Tabulated Data

This appendix contains both the raw and adjusted data from the 12 returns of Appendix B. The data are summarized, explained, and analyzed in the text.

# MOTIVATIONAL STYLE QUESTIONNAIRE

## TABULATED DATA

		ANSWER					
		<div> <div>ACTUAL COUNT</div> <div>ADJUSTED COUNT</div> </div>					
		A	B	C	D	E	F
ADJUSTMENT		+1	0	+2	0	+1	-2
RESPONDENT NUMBER	1	7 8	4 4	10 12	3 3	5 6	7 5
	2	5 6	5 5	8 10	6 6	5 6	7 5
	3	3 4	5 5	6 8	5 5	9 10	8 6
	4	6 7	4 4	6 8	2 2	8 9	10 8
	5	5.5 6.5	7 7	4 6	3.5 3.5	6.5 7.5	9.5 7.5
	6	9 10	9 9	7 9	4 4	4 5	3 1
	7	6 7	4 4	9 11	5 5	7 8	5 3
	8	6 7	5 5	10 12	4 4	3 4	8 6
	9	6 7	3 3	9 11	5 5	5 6	8 6
	10	5 6	3 3	7 9	3 3	7 8	9 7
	11	5 6	8 8	7 9	3 3	5 6	8 6
	12	5 6	6 6	6 8	4 4	5 6	10 8
TOTAL		68.5 80.5	63 63	89 113	47.5 47.5	69.5 81.5	92.5 68.5



APPENDIX I  
Managerial Style Questionnaire  
Tabulated Data

This appendix contains the tabulated data from the Managerial Style Questionnaire for both the reference population (Part I) and the study population (Part II). Data are summarized and evaluated in the text.

# MANAGERIAL STYLE QUESTIONNAIRE

		Tabulated Data															Part I - Reference Population										Total	N	$\bar{X}$	$s^2$
		2	8	10	8	0	10	18	15	6	75	12	15	0	13	38	0	230	16	14.38	-									
1. a)	Number of people supervised	1	1	(2)	1	na	2	1	2	1	2	2	1	na	1	1	na	16	12	1.33	0.242									
b)	Dependence upon staff for regular duties (1)	0	0	1	2	3	5	0	1	2	1	3	4	0	0	3	2	27	16	1.69	-									
2. a)	Number of extra recurring duties assigned	na	na	3	2	na	4	na	4	4	2	3	2	na	na	4	na	28	9	3.11	0.861									
b)	Initial dependence upon staff for these extra duties (1)	na	na	2	2	na	(3)	na	4	4	2	3	2	na	na	4	na	26	9	2.89	0.861									
c)	Subsequent dependence upon staff for extra duties (1)	4	1	1	2	2	1	0	2	0	1	3	1	0	2	1	0	21	16	1.31	-									
3. a)	Number of one-time functions assigned	4	4	3	3	na	4	na	3	na	3	3	3	na	3	4	na	37	11	3.36	0.255									
b)	Dependence upon staff for one-time functions (1)	4	1	-	3	3	3	0	3	0	1	1	3	-	0	0	3	25	14	1.79	-									
4. a)	Number of functions assumed	3	4	-	2	na	3	na	2	na	na	2	3	na	na	na	na	19	7	2.71	0.724									
b)	Initial dependence upon staff for assumed functions (1)	3	1	-	1	na	1	na	1	na	na	2	1	na	na	na	na	10	7	1.43	0.619									
c)	Subsequent dependence upon staff for assumed functions (1)																													
5. Special recognition for																														
a)	Regular duties	2	2	-	3	1	2	0	1	0	2	5	2	1	1	0	0				-									
b)	Assigned additional duties	2	1	-	2	0	1	na	0	0	1	1	1	0	0	0	0				-									
c)	Assumed additional duties	0	0	-	0	0	1	na	1	na	0	1	1	1	1	0	0				-									
6. Grade or rank		13	14	13	15	13	13	14	13	14	13	14	13	13	13	14	13	215	16	13.44	0.291									

1. Dependence coded as: 1 - Heavily; 2 - Moderately; 3 - Occasionally; 4 - Not at all
2. Dashes indicate missing or invalid data
3. na means not applicable

**MANAGERIAL STYLE QUESTIONNAIRE**

	Tabulated data															Part II - Study Population				Total	N	$\bar{X}$	s <sup>2</sup>
	5	47	13	5	0	4	0	700	80	4	2,000	10	2,868	12	239								
1. a) Number of people supervised	5	47	13	5	0	4	0	700	80	4	2,000	10	2,868	12	239								-
b) Dependence upon staff for regular duties	2	2	1	1	1	na	1	na	1	1	2	1	13	10	1.30								0.233
2. a) Number of extra recurring duties assigned	4	2	0	3	1	8	2	4	2	4	2	0	32	12	2.67								-
b) Initial dependence upon staff for these duties	4	2	na	3	na	1	na	3	1	3	2	na	19	8	2.38								1.126
c) Subsequent dependence upon staff for these duties	3	1	na	2	na	1	na	2	1	2	2	na	14	8	1.75								0.500
3. a) Number of one-time functions assigned	3	0	0	2	0	6	2	2	2	2	2	0	21	12	1.75								-
b) Dependence upon staff for one-time functions	4	na	na	3	na	2	na	3	2	2	2	na	18	7	2.57								0.619
4. a) Number of functions assumed	4	-	-	4	0	-	2	1	6	3	3	4	27	9	3.00								-
b) Initial dependence upon staff for these functions	3	-	-	3	na	2	na	-	2	3	1	2	16	7	2.29								0.572
c) Subsequent dependence upon staff for assumed functions	2	-	-	1	na	1	na	-	1	2	1	1	9	7	1.29								0.238
5. Special recognition for																							
a) Regular duties	0	3	3	3	-	-	1	1	1	2	5	0											-
b) Assigned additional duties	0	0	0	1	-	-	0	1	2	0	2	0											-
c) Assumed additional duties	0	0	0	1	-	-	0	0	1	0	4	0											-
6. Grade or rank	14	15	15	15	14	15	15	na	COR	CAPT	MAJN	16	119	8	14.88								0.411



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